Exec Mode show Commands (M-P)

The Exec Mode is the initial entry point into the command line interface system. Exec mode **show** commands are useful in troubleshooting and basic system monitoring.

Command Modes This section includes the commands **show mag-service** through **show ps-network statistics**.

Exec

The following prompt is displayed in the Exec mode:

`[local]host_name#`

☞

Important The commands or keywords/variables that are available are dependent on platform type, product version, and installed license(s).

show mag-service

Displays statistic and counter information for Mobile Access Gateway (MAG) services on this system.

Product	HSGW
	S-GW
Privilege	Inspector
Command Modes	Exec

The following prompt is displayed in the Exec mode:

```
[local]host_name#
```

Syntax Description

```
show mag-service { all | name service_name | session [ all | callid id |
counters | full | ip-address home_ip_address | msid id | summary | username
 name ] | statistics [ name service_name ] } [ | { grep grep_options | more }
]
```

all

Displays information for all configured MAG services on this system.

name service_name

Displays configuration information for a specific MAG service configured on this system.

service_name must be an existing MAG service expressed as an alphanumeric string of 1 through 63 characters.

session [all | callid id | counters | full | ip-address home_ip_address | msid id | summary | username name]

all: Displays all active MAG sessions using MAG services on the system.

callid *id*: Displays available session information for the specific call identification number.

id must be an 8-digit hexadecimal number.

counters: Displays counters for all MAG services on the system.This keyword can also be filtered by the following:

- **all**
- **callid**
- **ip-address**
- **msid**
- **summary**
- **username**

Refer to the keyword descriptions in this command for information regarding these filters.

full: Displays additional session information for all active MAG sessions using MAG services on the system. This keyword includes the information in the output of the **all** keyword plus additional information. This keyword can also be filtered by the following:

- **all**

- **callid**

- **ip-address**

- **msid**

- **summary**

- **username**

Refer to the keyword descriptions in this command for information regarding these filters.

ip-address *home_ip_address*: Displays available session information for a specific home IPv4 or IPv6 address of a subscriber in a service session.

msid *id*: Displays available information for a specific mobile station identification number or group of numbers based on wildcard entry.

id must be a valid MSID number and can be a sequence of characters and/or wildcard characters ('$' and/or '*'). The * wildcard matches multiple characters and the $ wildcard matches a single character. If you do not want the wildcard characters interpreted as wildcard enclose them in single quotes ('). For example: '$'.

summary: Displays the number of MAG sessions currently active for MAG services configured on the system.

username *name*: Displays available session information for a specific user in a service session.

name must be followed by an existing user name expressed as an alphanumeric string of 1 through 127 characters.

statistics [name *service_name*]

name *service_name*: Displays MAG service statistics for an existing MAG service specified as an alphanumeric string of 1 through 63 characters.

| { grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of the **grep** and **more** commands, refer to the *Regulating a Command's Output* section of the *Command Line Interface Overview* chapter.

Usage Guidelines   Use this command to view configuration information for MAG services on this system.

Example

The following command displays service statistics for the MAG service named *mag1*:

```
show mag-service name mag1
```

show map-service

Displays information configured for the Mobile Application Part (MAP) services, including MAP service features and operational configuration. Also includes some related configuration information for the HLR and EIR configuration parameters.

Product	SGSN
Privilege	Security Administrator, Administrator, Operator, Inspector
Command Modes	Exec
	The following prompt is displayed in the Exec mode:
	`[local]host_name#`
Syntax Description	`show map-service [all	name srvc_name] [	{ grep grep_options	more }]`

name srvc_name

Specifies an existing MAP service as an alphanumeric string of 1 through 63 characters.

| { grep grep_options | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of **grep** and **more**, refer to the *Regulating a Command's Output* section of the *Command Line Interface Overview* chapter.

Usage Guidelines	Use this command to display all MAP service or the statistics for a particular MAP service.

Example

The following command displays configuration information for the MAP service named *map-svc-1*:

```
show map-service name map-srv-1
```

☞

Important	Output descriptions for commands are available in the *Statistics and Counters Reference*.

show map statistics

Displays Mobile Application Part (MAP) statistics.

Product	SGSN
Privilege	Security Administrator, Administrator, Operator, Inspector

Command Modes	Exec

The following prompt is displayed in the Exec mode:

```
[local]host_name#
```

Syntax Description	**show map statistics [name** *srvc_name* **] [recovered-values] [	{ grep** *grep_options* **| more }]**

name *srvc_name*

Specifies an existing MAP service as an alphanumeric string of 1 through 63 characters.

recovered-values

Only displays recovered values for key KPI counters that were backed-up.

| { grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of **grep** and **more**, refer to the *Regulating a Command's Output* section of the *Command Line Interface Overview* chapter.

Usage Guidelines	Use this command to display all MAP statistics or the statistics for a particular MAP service.

Example

The following command displays statistics for the MAP service named *map-svc-1*:

show map statistics name map-svc-1

The following command displays combined statistics for all MAP services in the current context:

☞

Important	Output descriptions for commands are available in the *Statistics and Counters Reference*.

show maximum-temperatures

Shows the maximum temperature reached by each card since the last temperature timestamp reset.

Product	All
Privilege	Security Administrator, Administrator, Operator, Inspector
Command Modes	Exec

The following prompt is displayed in the Exec mode:

```
[local]host_name#
```

Syntax Description   **show maximum-temperatures [verbose] [| { grep** *grep_options* **| more }]**

verbose

Indicates that the output is to contain detailed information.

| { grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of **grep** and **more**, refer to the *Regulating a Command's Output* section of the *Command Line Interface Overview* chapter.

Usage Guidelines   Verify the maximum temperature reached by components in the chassis since the indicated timestamp.

☞

Important   This command is not supported on all platforms.

Example

```
show maximum-temperatures
show maximum-tempteratures verbose
```

show mbms bearer-service

Displays configuration information for bearer services configured for the multimedia broadcast multicast service (MBMS) running on this system.

Product   GGSN

SGSN

Privilege   Security Administrator, Administrator, Operator, Inspector

Command Modes   Exec

The following prompt is displayed in the Exec mode:

[local]*host_name*#

Syntax Description   **show mbms bearer-service [all] [apn** *apn_name* **mcast-addr** *ip_address* **] [full] [instance** *instance_id* **] [service-type { broadcast | multicast }] [sgsn-sessions] [summary] [| { grep grep_options | more }]**

all

Displays information on all bearer services configured on the system.

apn *apn_name* mcast-addr *ip_address*

Displays bearer service information of the MBMS for a specific Access Point Name (APN). *apn_name* is bound to a given BM-SC (Broadcast Multicast - Service Center) server address *ip_address*.

apn_name is the name of the APN expressed as an alphanumeric string of 1 through 62 characters that is case sensitive.

ip_address is the IP address of the BM-SC server in IPv4 dotted-decimal notation bound to the APN.

full

Displays full information for specific or all instances of bearer service in MBMS feature on system.

instance *instance_id*

Displays session information filtered for an instance of a bearer service running as an MBMS session and specified an integer from 1 through 64.

service-type { broadcast | multicast }

Displays information for a specific type of service for MBMS.

broadcast: Specifies the MBMS service type as broadcast only.

multicast: Specifies the MBMS service type as multicast only.

sgsn-sessions

Displays summary information for all the SGSN multicast sessions.

summary

Displays summary information for specific or all instances of a bearer service.

| { grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of **grep** and **more** options, refer to the *Regulating a Command's Output* section of the *Command Line Interface Overview* chapter.

Usage Guidelines   Use this command to verify the configuration of one or all bearer services and active instances of bearer services under MBMS. It is also useful for monitoring or troubleshooting purposes.

If this command is executed from within the local context with the **all** keyword, information for all bearer service instances running under MBMS will be displayed.

Example

The following command displays configuration information for all bearer service instances running on system:

```
show mbms bearer-service full all
```

☞

Important Output descriptions for commands are available in the *Statistics and Counters Reference*.

show mipfa

Displays information for specified Mobile IP Foreign Agent (MIP-FA) calls.

Product	PDSN
	GGSN
	ASN-GW
Privilege	Security Administrator, Administrator, Operator, Inspector
Command Modes	Exec
	The following prompt is displayed in the Exec mode:
	[local]*host_name*#

Syntax Description
```
show mipfa { [ [ counters | full | summary ] { all | callid call_id | msid
 ms_id | peer-address [ operator ] peer_address | reverse-tunnel { on | off }
 | username user_name } | statistics [ fa-service fa_name | peer-address [
peer_address | greater-than peer_address | less-than peer_address | > peer_address
 | < peer_address ] } ] | peers fa-service service_name [ current-sessions {
{ > | greater-than } sessions [ < sessions ] | { < | less-than } sessions [ >
 sessions ] | sessions } ] [ peer-address address ] } [ | { grep grep_options |
 more } ]
```

counters | full | summary

counters: Displayed output includes the statistical counters.

full: Displays detailed information.

summary: Displays only summary information. this is the default setting.

These options are not available in conjunction with the **statistics** keyword.

all | callid call_id | msid *ms_id* | peer-address *peer_ip_address* | reverse-tunnel { on | off } | username *user_name*

all: Displays all available information.

callid *call_id*: Displays information only for calls with the call ID specified as a 4-byte hexadecimal number.

msid *ms_id*: Displays information for a mobile subscriber ID expressed as a string from 7 to 16 digits for an IMSI, MIN, or RMI and/or characters $ and * for wildcard filter.

show mipha msid *01234567$$*

Shows any subscriber with an MSID that matches the upper 8 digits of the supplied MSID, such as 01234567, and any two digits at the remaining two places.

peer-address *peer_ip_address*: Displays information for the MIP call for the peer IP address specified using IPv4 dotted-decimal notation.

reverse-tunnel { **on** | **off** }: Enables the display of reverse IP tunnel information.

username *user_name*: Displays MIP call user information for the username specified as an alphanumeric string of 1 through 127 characters that may include wildcard characters ($ and *).

statistics [fa-service *fa_name* | peer-address [peer_address | greater-than *peer_address* | less-than *peer_address* | > *peer_address* | < *peer_address*]

Displays information for the foreign agent service specified by name or peer IP address.

fa-service *fa_name* must be an alphanumeric string of 1 through 63 characters.

peer-address *peer_address* must be specified using IPv4 dotted-decimal notation.

greater-than *peer_address*: Specifies the range of IPv4 addresses greater than *peer_address*.

less-than *peer_address*: Specifies the range of IPv4 addresses less than *peer_address*.

> *peer_address*: Specifies the range of IPv4 addresses greater than *peer_address*.

< *peer_address*: Specifies the range of IPv4 addresses less than *peer_address*.

peer-address [*operator*] *peer_address*

In conjunction with the **mipfa [summary] peer-address** keyword, indicates a range of peers is to be displayed.

peer-address [*operator* **]** *peer_address* must be specified using IPv4 dotted-decimal notation.

operator implies how to logically specify a range of peer-address and it must be one of the following:

- **<**: IP address is less than the specified *peer_address*

- **>**: IP address is greater than the specified *peer_address*

- **greater-than**: IP address is greater than the specified *peer_address*

- **less-than**: IP address is less than the specified *peer_address*

peers fa-service *service_name* [current-sessions { { > | greater-than } *sessions* [< *sessions*] | { < | less-than } *sessions* [> *sessions*] | *sessions* }] [peer-address *address*]

Displays peer servers for the specified FA service.

fa-service *service_name*: Specifies the name of an existing FA service for which the associated peer servers are to be displayed as an alphanumeric string of 1 through 63 characters.

current-sessions: Displays only peer servers with current sessions meeting the following criteria:

- **>** | greater-than *sessions*: Displays only peer servers currently running sessions higher than the value entered in this parameter. *sessions* must be an integer from 1 to 3000000. **Note**: the keyword "**greater-than**" and the ">" symbol are interchangeable in this instance of the command.

- **<** *sessions*: Displays only peer servers that are currently running sessions l than the **greater-than** parameter but less than the value entered in this parameter. *sessions* must be an integer from 1 to 3000000.

- **< | less-than** *sessions*: Displays only peer servers currently running sessions lower than the value entered in this parameter. *sessions* must be an integer from 1 to 3000000. **Note**: the keyword "**less-than**" and the "**<**" symbol are interchangeable in this instance of the command.

- **>** *sessions*: Displays only peer servers that are currently running sessions lower than the **less-than** parameter but more than the value entered in this parameter. *sessions* must be an integer from 1 to 3000000.

- *sessions*: Displays only peer servers currently running sessions that are equal to the value entered in this parameter. *sessions* must be an integer from 1 to 3000000.

peer-address *address*: Displays only peer servers matching the IP address entered in this parameter. *address* must be specified using IPv4 dotted-decimal notation and can be followed by the netmask of the address.

| { grep *grep_options* **| more }**

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of **grep** and **more**, refer to the *Regulating a Command's Output* section of the *Command Line Interface Overview* chapter.

Usage Guidelines   View MIP foreign agent information to support troubleshooting subscriber issues by viewing call information and filtering on the subscriber information using various methods.

Example

The following displays the call information for all mobile IP FA calls and statistics for *fa1*, respectively:

show mipfa all

The following command displays the statistics for the foreign agent service *fa1*:

show mipfa statistics fa-service fa1

The following commands displays call information for user *user6@aaa* in full detail and in summary:

show mipfa full username user6@aaa
show mipfa summary username user1

The following displays MIP FA call information for calls from mobile subscriber *4412345678* and peer address *10.2.3.4*, respectively:

show mipfa msid 4412345678 *4412345678*
show mipfa peer-address 10.2.3.4

☞

Important   Output descriptions for commands are available in the *Statistics and Counters Reference*.

show mipha

Displays information for specified Mobile IP Home Agent (MIP-HA) calls.

Product	HA
Privilege	Security Administrator, Administrator, Operator, Inspector
Command Modes	Exec

The following prompt is displayed in the Exec mode:

`[local]`*host_name*`#`

Syntax Description

```
show mipha { [ [ counters | full | summary ] { all | callid call_id | imsi
 imsi_num | ip-address ip_addr | msid msid_num | peer-address [ operator ]
peer_address | reverse-tunnel { on | off } | username user_name } | statistics
 [ ha-service ha_name | peer-address peer_address ] } ] | peers ha-service
service_name [ current-sessions { { > | greater-than } sessions [ < sessions ]
 | { < | less-than } sessions [ > sessions ] | sessions } ] [ peer-address
address ] } [ | { grep grep_options | more } ]
```

counters | full | summary

Default: concise output.

counters: Displayed output includes the statistical counters.

full: Displays detailed information.

summary: Displays only summary information.

These options are not available in conjunction with the **statistics** keyword.

msid *msid_num*

Displays information for the subscriber with the supplied MSID on HA.

msid *msid_num* specifies a mobile subscriber ID for which information is to be displayed. *ms_id* must be from 7 to 16 digits for an IMSI, MIN, or RMI and /or characters $ and * for wildcard filtering.

If **enforce imsi-min equivalence** is enabled on the chassis and MIN or IMSI numbers are supplied, this keyword/ filter will show subscribers with a corresponding MSID (MIN or IMSI) whose lower 10 digits matches the lower 10 digits of the supplied MSID.

show mipha msid *ABCD0123456789* or

show mipha msid *0123456789*

Shows any subscriber with a MSID that match the lower 10 digits of MSID supplied, such as 0123456789.

show mipha msid *01234567$$*

Shows any subscriber with a MSID that match the upper 8 digits of the supplied MSID, such as 01234567 and any two digits at the remaining two places.

all | callid *call_id* | imsi *imsi_num* | ip-address *ip_addr* | msid *msid_num* | peer-address [*operator*] *peer_address* | reverse-tunnel { on | off } | username *user_name*

all: Displays all available information.

callid *call_id*: Displays information only for calls with the call ID specified as a 4-byte hexadecimal number.

imsi *imsi_num*: Specifies an IMSI (international mobile subscriber ID) for which information is to be displayed. The IMSI is a 15-character field which identifies the subscriber's home country and carrier.

ip-address *ip_addr*: Displays statistics for a call with the IP address specified in IPv4 dotted-decimal notation.

msid *msid_num*: Specifies a mobile subscriber ID only for which information is to be displayed. *ms_id* must be from 7 to 16 digits specified as an IMSI, MIN, or RMI.

peer-address *peer_address*: Displays statistical information for the peer IP address specified using IPv4 dotted-decimal notation.

reverse-tunnel { **on** | **off** }: Enables the display of reverse IP tunnel information.

username *user_name*: Displays user MIP call information for the username specified as an alphanumeric string of 1 through 127 characters including wildcard characters ($ and *).

peer-address [*operator*] *peer_address*

In conjunction with **mipha [summary] peer-address** keyword, indicates a range of peers is to be displayed.

peer_address must be specified using IPv4 dotted-decimal notation.

operator implies how to logically specify a range of peer-addresses and it must be one of the following:

- <: IP address is less than the specified *peer_address*

- >: IP address is greater than the specified *peer_address*

- **greater-than**: IP address is greater than the specified *peer_address*

- **less-than**: IP address is less than the specified *peer_address*

statistics [ha-service *ha_name* | peer-address *peer_address*]

Displays statistical information for the home agent service specified by its name (an alphanumeric string of 1 through 63 characters) or peer IP address (IPv4 notation).

peers ha-service *service_name* [current-sessions { { > | greater-than } *sessions* [< *sessions*] | { < | less-than } *sessions* [> *sessions*] | *sessions* }] [peer-address *address*]

Displays peer servers for the specified HA service.

ha-service *service_name*: Specifies the name of an existing HA service for which the associated peer servers are to be displayed as an alphanumeric string of 1 through 63 characters.

current-sessions: Displays only peer servers with current sessions meeting the following criteria:

- > | greater-than *sessions*: Displays only peer servers currently running sessions higher than the value entered in this parameter. *sessions* must be an integer from 1 to 3000000. **Note**: the keyword "**greater-than**" and the ">" symbol are interchangeable in this instance of the command.

- < *sessions*: Displays only peer servers that are currently running sessions higher than the **greater-than** parameter but less than the value entered in this parameter. *sessions* must be an integer from 1 to 3000000.

- < | less-than *sessions*: Displays only peer servers currently running sessions lower than the value entered in this parameter. *sessions* must be an integer from 1 to 3000000. **Note**: the keyword "**less-than**" and the "<" symbol are interchangeable in this instance of the command.

- > *sessions*: Displays only peer servers that are currently running sessions lower than the **less-than** permitter but more than the value entered in this parameter. *sessions* must be an integer from 1 to 3000000.

- *sessions*: Displays only peer servers currently running sessions that are equal to the value entered in this parameter. *sessions* must be an integer from 1 to 3000000.

peer-address *address*: Displays only peer servers matching the IP address entered in this parameter. *address* must be specified using IPv4 dotted-decimal notation and can be followed by the netmask of the address.

| { grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of **grep** and **more**, refer to the *Regulating a Command's Output* section of the *Command Line Interface Overview* chapter.

Usage Guidelines

View MIP home agent information to support troubleshooting subscriber issues by viewing call information and filtering on the subscriber information using various methods.

Example

The following displays the call information for all mobile IP HA calls and statistics for *ha1*, respectively:

```
show mipha all
show mipha statistics ha-service ha1
```

The following commands displays call information for user *isp1user1* in full detail and in summary:

```
show mipha full username isp1user1
show mipha summary username user1
```

The following displays MIP-HA call information for calls from mobile subscribers with reverse tunneling *off* and peer address *209.165.200.229*, respectively:

```
show mipha reverse-tunnel off
show mipha peer-address 209.165.200.229
```

☞

Important   Output descriptions for commands are available in the *Statistics and Counters Reference*.

show mipv6ha

Displays information for specified Mobile IPv6 Home Agent (MIPv6-HA) calls.

Product

PDSN

HA

Privilege

Security Administrator, Administrator, Operator, Inspector

Command Modes   Exec

The following prompt is displayed in the Exec mode:

`[local]host_name#`

Syntax Description   **show mipv6ha [all | callid** *callid* **| counters** *filter* **| full** *filter* **| ipv6-address** *ip_addr***| statistics mipv6ha-service** *mipv6ha-service_name* **| summary** *filter* **| username** *user_name* **]**

all

Displays all information for MIPv6-HA calls.

callid *call_id*

Specifies the Call Identification number as an 8-digit hexadecimal number.

counters [all | callid | ipv6-address | username]

Displays the counters associated with the MIPv6-HA service. The following filters are available:

   • **all**

   • **callid:**

   • **ipv6-address**

   • **username**

full [all | callid | ipv6-address | username]

Displays all available information for the associated display or filter keyword.

The following filters are available:

   • **all**

   • **callid:**

   • **ipv6-address**

   • **username**

ipv6-address *ip_addr*

Displays information for subscribers connected via the packet control function for a specific or range of IPv6 addresses. The address must be specified using the IPv6 colon-separated-hexadecimal notation.

   • **<**: Filters output so that only information less than the specified IPv6 address value is displayed.

   • **>**: Filters output so that only information greater than the specified IPv6 address value is displayed.

   • **less-than**: Filters output so that only information less than the specified IPv6 address value is displayed.

   • **greater-than**: Filters output so that only information greater than the specified IPv6 address value is displayed.

statistics [mipv6ha-service *mipv6ha-service_name*]

Displays all information collected for specific protocol since last the **restart** or **clear** command.

This can be filtered according to a specified **mipv6ha-service**.

summary [all | callid | ipv6-address | username]

Displays summary information for defined sessions, based on defined parameters.

The following filters are available:

- **all**

- **callid:**

- **ipv6-address**

- **username**

username *user_name*

Displays session information for a specific username.

Usage Guidelines View MIPv6 home agent information to support troubleshooting subscriber issues by viewing call information and filtering on the subscriber information using various methods.

Example

The following displays the call information for all mobile IPv6 HA calls:

show mipv6ha all

The following command displays call information for user *mipv6hauser1* in full detail and in summary:

show mipv6ha full username mipv6hauser1

☞

Important Output descriptions for commands are available in the *Statistics and Counters Reference*.

show mme-embms-service

Displays configuration information for MME-eMBMS services on this system. MME-eMBMS is the LTE version of Multimedia Broadcast/Multicast Service (eMBMS) on the Cisco Mobility Management Entity (MME).

Product MME

Privilege Inspector

Command Modes Exec

The following prompt is displayed in the Exec mode:

```
[local]host_name#
```

Syntax Description

show mme-embms-service { all | all-session-info [summary] | m3ap statistics { all [verbose] | name *mme_embms_service_name* **} | mce-association { all [summary] | full | name** *mme_embms_service_name* **[summary] | path-info { all | name** *mme_embms_service_name* **} } | mce-session-association { plmn-id mcc** *mcc* **mnc** *mnc* **mce-id** *mce_id* **| tmgi-service-id** *tmgi_serv_id* **[mbms-flow-id** *mbms_flow_id* **] } | name** *mme_embms_service_name* **| sctp statistics { all | name** *mme_embms_service_name* **} }**

mme_embms_service_name

Identifies the name of a specific MME-eMBMS service. The name comprises a string of 1 to 63 alphanumeric characters.

all

Lists all configured MME-eMBMS service instances on the system and displays upper-level service information for each of the services.

all-session-info [summary]

Lists all active eMBMS sessions currently being handled by the MMEmgr. Optionally, the display can provide a summary of eMBMS information for each session.

m3ap statistics { all [verbose] | name }

Displays all M3AP statistics available for the MME or displays the M3AP statistics for the named "active" MME-eMBMS service. With the **all** keyword, the command output is used to clarify status of MBMS sessions with the following counters in the output:

   • MBMS Session Start Request

   • MBMS Session Start Response

   • MBMS Session Start Response Failure

mce-association { all | full | name | path-info }

Displays peer MCE associations for either all eMBMS services or specifically for the named eMBMS service. Filters are included in the CLI to control the level of detail in the output.

When the **mce-association** and **path-info** keywords are used together, the output displays path informaiton for the MCEs associated with either all or only with the named MME-eMBMS service(s).

mce-session-association { plmn-id mcc *mcc* mnc *mnc* mce-id *mce_id* | tmgi-service-id *tmgi_service_id* mbms-flow-id *mbms_flow_id* }

Displays the MCE session associations for either

   • a specific carrier, identified by the PLMN ID

   • specific session attributes, such as Temporary Mobile Group Identity (TMGI) and/or Flow Identifier

name *mme_embms_service_name* [summary]

Displays the configuration for the named eMBMS service.

sctp statistics { all | name *mme_embms_service_name* }

Displays SCTP statistics for all or named "active" eMBMS service(s)

| { grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of the **grep** and **more** commands, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

Usage Guidelines   Use this command to view configuration information for MME-eMBMS services on this system and to monitor status of the MCE associations and sessions.

Example

The following command displays MCE session information filtered by the TMGI *42949672*:

```
show mme-embms-service mce-session-association tmgi-service-id 42949672
```

show mme-hss session

Displays session information of Mobility Management Entity-Home Subscriber Server (MME-HSS) service(s) running on a peer or local system.

Product   MME

Privilege   Inspector

Command Modes   Exec

The following prompt is displayed in the Exec mode:

```
[local]host_name#
```

Syntax Description   ```
show mme-hss session [summary | full] [all | call-id call_identifier |
mdn mdn_string | nai nai_string] [verbose] [| { grep grep_options | more }
]
```

### summary

This keyword displays the summarized output of this command.

### full

This keyword displays detailed output of this command.

**all**

This keyword displays information of all MME-HSS sessions running on this system.

**call-id** *call_identifier*

Displays summarized or detailed statistics of MME-HSS sessions running and filtered by the call identifier with an MME-HSS service configured on this system.

*call_identifier* must an existing call identity in eight character Hex digit format running on an MME service on system.

**mdn** *mdn_string*

Displays summarized or detailed statistics of MME-HSS sessions running and filtered by mobile directory Number (MDN) with an MME-HSS service configured on this system.

*mdn_string* must be an alphanumeric string of 1 to100 characters.

**nai** *nai_string*

Displays summarized or detailed statistics of MME-HSS sessions running and filtered by Network Access Identifier (NAI) with an MME service configured on this system.

*nai_string* must be an alphanumeric string of 1 to128 characters.

**verbose**

This keyword displays the comprehensive information of specific or set of arguments.

**| { grep** *grep_options* **| more }**

This argument searches the output of the root command and selects the lines matching one or more patterns/options. The types of patterns are controlled by the options specified with *grep_options*.

For details on the usage of the **grep** and **more** commands, refer to the Regulating a Command's Output section in CLI Overview chapter of the Command Line Interface Reference.

**Usage Guidelines**     Use this command to view detailed or summarized session statistics of MME-HSS sessions running on MME-HSS services on a system. This command also provides the various filter criteria to display the session statistics.

**Example**

The following command displays information of all MME-HSS sessions of MME-HSS services running on a system:

**show mme-hss session all**

☞

**Important**     Output descriptions for commands are available in the *Statistics and Counters Reference*.

The following command displays summarized session information of all MME-HSS sessions running on a system:

```
show mme-hss session summary all
```

show mme-service

Displays configuration information for Mobility Management Entity (MME) services on this system.

Product	MME
Privilege	Inspector
Command Modes	Exec

The following prompt is displayed in the Exec mode:

```
[local]host_name#
```

Syntax Description

```
show mme-service { all | name svc_name [ offload statistics ] } [ | { grep
 grep_options | more } ]
```

all

Displays configuration information for all MME services configured on this system.

name *service_name*

Displays configuration information for an existing MME service specified as an alphanumeric string of 1 through 63 characters.

offload statistics

Displays configuration information for the MME load rebalancing feature (UE offload), as well as current statistics about any active offloading processes.

This keyword option is only available in Release 14.0 and higher.

| { grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of the **grep** and **more** commands, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

Usage Guidelines Use this command to view configuration information for MME services on this system.

Example

The following command displays service statistics for the MME service named *mme1*:

```
show mme-service name mme1
```

☞

Important   Output descriptions for these commands are available in the *Statistics and Counters Reference*.

show mme-service db record

Displays the Mobile Management Entity (MME) database records for MME sessions grouped in session instances on this system and filtered with IMSI or GUTI as criteria.

Product   MME

Privilege   Inspector

Command Modes   Exec

The following prompt is displayed in the Exec mode:

`[local]host_name#`

Syntax Description   **show mme-service db record { all | call-id** *call_id* **| guti plmn** *plmn_id*
group-id *mme_grp_id* **code** *mme_code* **m-tmsi** *mtmsi_value* **| imsi** *imsi_identifier* **}**

all

Displays all database records of a session instance used for MME service.

call-id *call_id*

Displays database records filtered by the call ID specified as an 8-digit hexadecimal number

guti plmn *plmn_id* **group-id** *mme_grp_id* **code** *mme_code* **m-tmsi** *mtmsi_value*

Displays database records filtered by the Globally Unique Temporary Identifier (GUTI). The GUTI is constructed from the GUMMEI and the M-TMSI.

The GUMMEI is constructed from the public land mobile network (PLMN) ID [MMC and MNC] and the MME Group ID (MMEGI). Within the MME, the mobile is identified by the M-TMSI.

A GUTI has: 1) a unique identity for the MME which allocated the GUTI; and 2) the unique identity of the UE within the MME that allocated the GUTI.

The MME Identifier (MMEI) is constructed from an MME Group ID (MMEGI) and an MME Code (MMEC).

imsi *imsi_identifier*

Displays database records filtered by International Mobile Subscriber Identity (IMSI).

imsi_identifier is a 15-character IMSI field which identifies the subscriber's home country and carrier. Wildcard characters $ and * are allowed. The * wildcard matches multiple characters and the $ wildcard matches a single character. If you do not want the wildcard characters interpreted as a wildcard enclose them in single quotes ('). For example; '$'.

| Usage Guidelines | Use this command to view database records for all or a particular instance of session manager for MME services on this system with IMSI or GUTI as a filter criteria. |

Example

The following command displays the summary database records of a session instance for a subscriber having IMSI as *123455432112345* in the MME service:

```
show mme-service db record imsi 123455432112345
```

☞

Important Output descriptions for these commands are available in the *Statistics and Counters Reference*.

show mme-service db statistics

This command displays the Mobile Management Entity (MME) database statistics for all or specific MME sessions on this system.

Product	MME
Privilege	Inspector
Command Modes	Exec

The following prompt is displayed in the Exec mode:

[local]*host_name*#

| Syntax Description | `show mme-service db statistics [ instance smgr_instance ]` |

instance *smgr_instance*

Displays MME database statistics for a specific instance of a session manager running the MME service.

smgr_instance is an instance ID specified as an integer from 0 through 4294967295. If an instance is not specified, summary statistics are displayed.

| Usage Guidelines | Use this command to view database statistics for all or a particular instance of session manager for MME services on this system. |

Example

The following command displays summary database statistics for the MME service running on a system:

```
show mme-service db statistics
```

☞

Important Output descriptions for these commands are available in the *Statistics and Counters Reference*.

show mme-service enodeb-association

Displays configuration information for an eNodeB association within an MME service.

Product	MME
Privilege	Inspector
Command Modes	Exec

The following prompt is displayed in the Exec mode:

`[local]host_name#`

Syntax Description

```
show mme-service enodeb-association [ summary | full [ wf1 ] | path-info
  [ wf1 ] ] [ all  | enodeb-name enodeb_name | henbgw | ipsec |
mme-service-name mme_svc_name | peer-address peer_ip_address | peer-id
peer_identifier ] [ | { grep grep_options | more } ]
```

summary

Displays summarized output for this command.

full

Displays detailed output for this command.

wf1

Displays output in a tabular format.

path-info

Displays S1 path association information of eNodeBs associated with MME services on this system.

all

Displays information of all eNodeBs associated with MME services on this system.

enodeb-name _enodeb_name_

Displays information for the specified eNodeB associated with MME services on this system.

henbgw

Displays information for Home eNodeB Gateways (HeNB-GWs) associated with MME services on this system.

☞

Important	In Release 20, 21.0 and 21.1, HeNBGW is not supported. This keyword must not be used for HeNBGW in these releases. For more information, contact your Cisco account representative.

ipsec

Displays information of all IPSec enabled eNodeBs associated with MME services on this system.

mme-service-name *mme_svc_name*

Displays summarized or detailed configuration information for eNodeBs associated with an existing MME service specified as an alphanumeric string of 1 through 63 characters.

peer-address *peer_ip_address*

Displays summarized or detailed configuration information of eNodeBs associated with an existing MME peer IP address configured with an MME service and expressed in IPv4 dotted-decimal or IPv6 colon-separated-hexadecimal notation.

peer-id *peer_identifier*

Displays summarized or detailed configuration information for eNodeBs associated with a an existing MME peer ID configured with an MME service and specified as an integer from 1 through 4294967295.

| { grep *grep_options* **| more }**

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of the **grep** and **more** commands, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

Usage Guidelines   Use this command to view configuration information of eNodeBs associated with an MME service on this system.

Example

The following command displays detailed service statistics for associated eNodeBs within the MME service named *ingress*:

```
show mme-service enodeb-association full mme-service-name ingress
```

👉

Important   Output descriptions for commands are available in the *Statistics and Counters Reference*.

show mme-service id

This command displays the current number of MME-assigned and eNodeB-assigned S1AP session IDs.

Product   MME

Privilege   Inspector

Command Modes   Exec

The following prompt is displayed in the Exec mode:

`[local]`*`host_name`*`#`

Syntax Description

`show mme-service id summary [ service-name` *`name`* **`[ sessmgr`** *`instance`* **`] ] | [`**
`peer-id` *`id`* **`[ sessmgr`** *`instance`* **`] ] [ | { grep`** *`grep_options`* **`| more } ]`**

id summary

Displays the current number of MME-assigned and eNodeB-assigned S1AP session IDs.

service-name *name*

Filters the output of the command by for an existing MME service name specified as an alphanumeric string of 1 through 63 characters.

peer-id *id*

Filters the output of the command by a MME peer identifier specified as an integer from 1 through 4294967295.

sessmgr *instance*

Filters the output of the command by the specified session manager instance as an integer from 1 through 4294967295.

|{ grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of the **grep** and **more** commands, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

Usage Guidelines

Use this command to display the current number of MME-assigned and eNodeB-assigned S1AP session IDs.

show mme-service session

Displays session information for Mobile Management Entity (MME) service(s) running on a peer or local system.

Product

MME

Privilege

Inspector

Command Modes

Exec

The following prompt is displayed in the Exec mode:

`[local]`*`host_name`*`#`

Syntax Description

`show mme-service session [ summary | full | counters ] [ all | callid`
`call_identifier` **`| imei`** *`imei_id`* **`| imsi`** *`imsi_id`* **`| ipsec | mme-service`** *`service_name`*
`| msisdn` *`number`* **`| pdn-address`** *`pdn_ip_address`* **`| s1-peer`** *`s1_peer_ip_address`* **`|`**

```
s11-peer s11_peer_ip_address | vlr-name vlr_name | ue-ecm-state { connected |
 idle } ] [ | { grep grep_options | more } ]
```

summary

Displays summarized output for this command.

full

Displays detailed output for this command.

counters

Displays all counters for related events and messages for an MME session running on a system.

all

Displays information for all MME sessions running on this system.

callid *call_identifier*

Displays summarized or detailed configuration information for an MME session filtered by a call identifier within an MME service configured on this system.

call_identifier must be an existing call identity in 8-digit hexadecimal format running in an MME service on this system.

imei *imei_id*

Displays summarized or detailed configuration information about MME sessions running and filtered by an International Mobile Equipment Identification (IMEI) number within an MME service configured on this system.

imei_id must be an existing IMEI in an existing MME service on the system. *imei_id* must contain an 8-digit TAC (Type Allocation Code) and a 6-digit SNR (Serial Number).

imsi *imsi_id*

Displays summarized or detailed configuration information about MME sessions running and filtered by an International Mobile Subscriber Identity (IMSI) number within an MME service configured on the system.

imsi_id must be an existing IMSI in an existing MME service on the system. *imsi_id* is a 15-character IMSI field which identifies the subscriber's home country and carrier.

Wildcard characters $ and * are allowed. The * wildcard matches multiple characters and the $ wildcard matches a single character. If you do not want the wildcard characters interpreted as a wildcard enclose them in single quotes ('). For example; '$'.

ipsec

Displays information for all IPSec enabled sessions using MME services on the system.

mme-service *service_name*

Displays summarized or detailed configuration information about MME sessions running and filtered by an MME service name configured on the system.

service_name must be a configured MME service on the system, expressed as an alphanumeric string of 1 through 63 characters.

msisdn *number*

Displays summarized or detailed configuration information about MME sessions running and filtered by a Mobile Station International ISDN Number.

number must be a combination of the CC (Country Code) and National (significant) mobile number, not exceeding 15 digits.

pdn-address *pdn_ip_address*

Displays summarized or detailed configuration information about MME sessions running and filtered by the IP address of a connected PDN(s) within an MME service configured on this system.

pdn_ip_address must be a configured IP address of a PDN expressed in IPv4 dotted-decimal or IPv6 colon-separated-hexadecimal notation within an existing MME service on the system.

s1-peer *s1_peer_ip_address*

Displays summarized or detailed configuration information of MME sessions running and filtered by the IP address of a peer connected through an S1 interface within an MME service configured on this system.

s1_peer_ip_address must be a configured IP address of a peer on S1 interface expressed in IPv4 dotted-decimal or IPv6 colon-separated-hexadecimal notation within an existing MME service on this system.

s11-peer *s11_peer_ip_address*

Displays summarized or detailed configuration information of MME sessions running and filtered by IP address of a peer connected through S11 interface with an MME service configured on this system.

s11_peer_ip_address must be a configured IP address of a peer on S11 interface expressed in IPv4 dotted-decimal or IPv6 colon-separated-hexadecimal notation within an existing MME service on this system.

vlr-name *vlr_name*

Displays summarized or detailed configuration information of MME sessions running and filtered by Visitor Location Register (VLR) name.

vlr_name must be an alphanumeric string of 1 through 63 characters.

ue-ecm-state { connected | idle }

Displays summarized or detailed configuration information about MME sessions running and filtered by the UE's EPS Connected Management (ECM) state.

connected: Specifies that summarized or detailed configuration information about MME sessions is to be displayed based on the UE ECM state of "connected".

idle: Specifies that summarized or detailed configuration information about MME sessions is to be displayed based on the UE ECM state of "idle".

| { grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of the **grep** and **more** commands, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

Usage Guidelines Use this command to view information for MME sessions within MME services on this system.

Example

The following command displays detailed session statistics for an MME service running on this system:

show mme-service session full

☞

Important Output descriptions for these commands are available in the *Statistics and Counters Reference*.

The following command displays detailed session counters for an MME service running on this system:

show mme-service session counters

show mme-service statistics

This command displays MME service statistics specified by various criteria.

Product MME

Privilege Security Administrator, Administrator

Command Modes Exec

The following prompt is displayed in the Exec mode:

[local]*host_name*#

Syntax Description **show mme-service statistics [dcnr | decor [decor-profile** *profile_name* **] | emm-only | esm-only | handover | mme-service** *mme_svc_name* **| paging-profile [profile-name** *paging_profile_name* **] | peer-id** *peer_identifier* **| recovered-values | s1ap | sctp | tai taidb** *db_name* **mcc** *mcc* **mnc** *mnc* **tac** *tac* **] + [verbose] [| { grep** *grep_options* **| more }]**

dcnr

Displays the dual connectivity NR statistics.

decor [decor-profile *profile_name* **]**

Displays the Decor statistics for all the configured Decor profile(s).

decor-profile *profile_name*: Displays Decor statistics for the specified Decor profile. *profile_name* must be an alphanumeric string of 1 through 63 characters.

emm-only

Displays only EPS mobility management (EMM) related statistics, or filters EMM statistics for a specific MME service name or a specific eNodeB association peer identifier.

esm-only

Displays only EPS session management (ESM) related statistics, or filters ESM statistics for a specific MME service name or a specific eNodeB association peer identifier.

handover

Displays only handover related statistics (such as Intra-MME, EUTRAN<->EUTRAN via S10, EUTRAN<->UTRAN via GnGp, EUTRAN<->GERAN via GnGp, and EUTRAN<->UTRAN via S3), or filters handover statistics for a specific MME service name or a specific eNodeB association peer identifier.

mme-service *mme_svc_name*

Displays MME service statistics for only the specified MME service name.

paging-profile [profile-name *paging_profile_name*]

Displays the paging profile statistics for all the configured paging-profile(s) one after another.

profile-name *paging_profile_name*: Displays the paging profile statistics for the given profile name. *paging_profile_name* must be an alphanumeric string of 1 through 63 characters.

peer-id *peer_identifier*

Displays MME service statistics for only the specified eNodeB association peer identifier.

recovered-values

Enables the display of recovered counter values if the backup and recovery of statistics has been enabled. This keyword can be combined with the **emm-only**, the **esm-only**, or the **peer-id** options. For details on this feature, refer to the *Backup and Recovery of Key KPI Statistics* feature chapter in the *MME Administration Guide*.

s1ap

Displays only S1-AP related statistics, or filters S1-AP statistics for a specific MME service name or a specific eNodeB association peer identifier..

sctp

Displays only SCTP related statistics, or filters SCTP statistics for a specific MME service name or a specific eNodeB association peer identifier.

tai taidb *db_name* mcc *mcc* mnc *mnc* tac *tac*

Displays only TAI statistics stored for the specified TAI management database name and MCC/MNC/TAC .

db_name : Specifies the name of the TAI management database as an alphanumeric string of 1 through 64 characters.

mcc: specifies the mobile country code (MCC) portion of a PLMN identifier as an integer from 100 through 999.

mnc: specifies the mobile network code (MNC) portion of a PLMN identifier as a 2- or 3-digit integer from 00 through 999.

tac: specifies the Tracking Area Code portion of the TAI as an integer from 1 through 65535.

☞

Important For the MME to report TAI level statistics, you must first issue the MME Service Configuration Mode command: **statistics collection-mode tai.** Only those MME Services which are configured accordingly will provide TAI based statistics. When the collection-mode is configured to **tai**, the **peer-id** keyword will no longer report valid statistics (All values will be shown as ZERO).

⚠

Caution Changing this collection mode will restart the MME service and will clear all statistics at the MME service and eNodeB level.

verbose

Displays comprehensive information for a specific argument or set of arguments.

| { grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of the **grep** and **more** commands, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

Usage Guidelines This command is used to display the statistical information of MME services based on various filter criteria.

Example

The following command displays all service statistics for all MME services on a system:

```
show mme-service statistics
```

The following command displays the service statistics of all MME services on a system related to S1-AP:

```
show mme-service statistics s1ap
```

The following command displays only EMM related statistics for the only the MME service named **ingress**:

```
show mme-service statistics mme-service ingress emm-only
```

show module

Displays the current status of the Version Priority List (VPL) for one or all plugin modules installed on the system. This command is associated with the dynamic software upgrade process.

| **Product** | All |

| **Privilege** | Security Administrator, Administrator |

| **Command Modes** | Exec |

The following prompt is displayed in the Exec mode:

`[local]host_name#`

| **Syntax Description** | `show module [ plugin_name ]` |

plugin_name

Filters the output of the VPL by an existing plugin name expressed as an alphanumeric string of 1 through 16 characters.

| **Usage Guidelines** | Display the priority, load status, location, installation timestamp and download status of one or all plugin modules. A plugin module is a shared object library that can be dynamically updated or rolled back. Refer to the *System Administration Guide* for additional information on dynamic software updates. |

Example

The following command displays the VPL status of all plugin modules currently installed on the system:

`show module`

show mpls cross-connect

Displays Multiprotocol Label Switching (MPLS) cross-connect information.

| **Product** | GGSN |

| **Privilege** | Security Administrator, Administrator |

| **Command Modes** | Exec |

The following prompt is displayed in the Exec mode:

`[local]host_name#`

| **Syntax Description** | `show mpls cross-connect [ | { grep grep_options | more } ]` |

| { grep grep_options | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of the **grep** and **more** commands, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

Usage Guidelines This command displays MPLS cross-connect information. MPLS tunnel cross-connects between interfaces and Label-Switched Paths (LSPs) connect two distant interface circuits of the same type by creating MPLS tunnels that use LSPs as the conduit.

Example

The following command displays MPLS cross-connect information:

show mpls cross-connect

☞

Important Output descriptions for these commands are available in the *Statistics and Counters Reference*.

show mpls ftn

Displays MPLS FEC-to-NHLFE (FTN) table information.

Product GGSN

Privilege Security Administrator, Administrator

Command Modes Exec

The following prompt is displayed in the Exec mode:

[local]*host_name*#

Syntax Description **show mpls ftn [vrf** *vrf_name* **] [| { grep** *grep_options* **| more }]**

vrf *vrf_name*

Displays FTN information for the Virtual Routing and Forwarding (VRF) specified as an alphanumeric string of 1 through 63 characters.

| { grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of the **grep** and **more** commands, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

Usage Guidelines This command displays MPLS FEC (Forward Error Correction)-to-NHLFE (Next-Hop label Forwarding Entry) table information.

Example

The following command displays MPLS FTN information:

show mpls ftn

☞

Important   Output descriptions for these commands are available in the *Statistics and Counters Reference*.

show mpls ilm

Displays MPLS Incoming Label Map (ILM) table information.

Product   GGSN

Privilege   Security Administrator, Administrator

Command Modes   Exec

The following prompt is displayed in the Exec mode:

`[local]host_name#`

Syntax Description   **show mpls ilm [fec | label** *label_value* **| verbose][| { grep** *grep_options* **| more }]**

fec

Displays Forwarding Equivalency Class (FEC) information.

label *label_value*

Displays MPLS ILM information for the specified label. label_value is an integer from 16 through 1048575.

verbose

Displays detailed information for the MPLS ILM table.

|{ grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of the **grep** and **more** commands, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

Usage Guidelines   This command displays MPLS Incoming Label Map (ILM) table information.

Example

The following command displays information for MPLS ILM information:

show mpls ilm

Ú

Important   Output descriptions for these commands are available in the *Statistics and Counters Reference*.

show mpls ldp

Displays MPLS Label Distribution Protocol (LDP) information.

Product   GGSN

Privilege   Security Administrator, Administrator

Command Modes   Exec

The following prompt is displayed in the Exec mode:

`[local]host_name#`

Syntax Description   `show mpls ldp { bindings { ldp-id IPv4_add | local [ ldp-id | local | prefix | remote ] | prefix IPv4_addr | remote } | discovery | neighbor { detail | ldp-id    } }`

bindings

Displays the MPLS LDP label bindings.

ldp-id

Displays label values for a specific peer LDP ID.

local

Displays locally assigned label values.

prefix

Displays label values for a specific prefix.

remote

Displays remotely assigned label values.

discovery

Displays the MPLS LDP discovery information.

neighbor

Displays the MPLS LDP peer information.

detail

Displays the MPLS LDP peer information in details. The displayed information includes, Local LDP ID, Peer LDP ID, Transport address, State (for example, Established), Role (for example, Active), Uptime, Keepalive negotiated hold time, Proposed Local/Peer, Remaining Keepalive hold time, and Address advertised.

Usage Guidelines

This command displays statistical information for an MPLS Label Distribution Protocol configuration. The information includes Prefix, LDP ID, Label, Nexthop, and Egress_if_index for all MPLS LDP Bindings configurations.

Example

The following command displays information about MPLS LDP protocol related configurations:

show mpls ldp discovery neighbor ldp-id 209.165.200.229 detail bindings ldp-id 209.165.200.248 prefix 192.168.102.232 local remote

The following command displays the MPLS LDP discovery information, including, LDP Peer IDs, Hold time (in seconds), Proposed Local/Peer, and Remaining (time in seconds):

show mpls ldp discovery

The following command displays the remotely assigned label values in the MPLS LDP binding configuration:

show mpls ldp bindings remote

☞

Important   Output descriptions for these commands are available in the *Statistics and Counters Reference*.

show mpls nexthop-label-forwarding-entry

Displays MPLS Next-Hop Label Forwarding Entry (NHLFE) table information.

Product

GGSN

Privilege

Security Administrator, Administrator

Command Modes

Exec

The following prompt is displayed in the Exec mode:

[local]*host_name*#

Syntax Description

show mpls nexthop-label-forwarding-entry [| { grep *grep_options* **| more }]**

|{ grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of the **grep** and **more** commands, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

Usage Guidelines   This command displays MPLS Next-Hop Label Forwarding Entry (NHLFE) table information.

Example

The following command displays MPLS NHLFE information:

```
show mpls nexthop-label-forwarding-entry
```

☞

Important   Output descriptions for these commands are available in the *Statistics and Counters Reference*.

show mrme-service

Displays configuration and/or statistical information for MRME services on this system.

Product   SaMOG

Privilege   Security Administrator, Administrator, Operator, Inspector

Syntax Description   **show mrme-service { all | name** *name* **| statistics { all [verbose] |**
dns-stats | name *name* **[dns-stats] } } [| { grep** *grep_options* **| more }]**

all

Displays all MRME services.

name *name*

Displays information for specific MRME service name.

name is a string of size *1* to *63*.

statistics

Displays Node level Statistics for MRME.

verbose

Specifies Detailed statistics.

dns-stats

Specifies the information related to theDNS selection of P-GW.

| { grep *grep_options* | more }

Pipes (sends) the output of this command to the specified command. You must specify a command to which the output of this command will be sent.

For details on the usage of **grep** and **more**, refer to the *Regulating a Command's Output* section of the *Command Line Interface Overview* chapter.

Usage Guidelines Use this command to displays configuration and/or statistical information for MRME services on this system.

Example

```
show mrme-service all
```

show mrme-service active-session

Displays configuration and statistical information of the data stored in the active session entry (if present) of the specified User Equipment's (UE) MAC address.

Product SaMOG

Privilege Security Administrator, Administrator, Operator, Inspector

Syntax Description
```
show mrme-service active-session mac   mac_address  [ | { grep grep_options |
more } ]
```

mac *mac_address*

Specifies the MAC address.

mac_address must be an alpha-numeric string of 1 to 15 characters and should not be separated by a colon or hyphen.

| { grep *grep_options* | more }

Pipes (sends) the output of this command to the specified command. You must specify a command to which the output of this command will be sent.

For details on the usage of **grep** and **more**, refer to the *Regulating a Command's Output* section of the *Command Line Interface Overview* chapter.

Usage Guidelines Use this command to display the configuration and statistical information of the data stored in the active session entry (if present) of the specified User Equipment's (UE) MAC address.

Example

```
show mrme-service active-session mac 001d33227310
```

show mrme-service imsi-sticky

Displays configuration and statistical information of the IMSI to session manager mapping (if available) in the mapping table of the IPSG manager.

Product SaMOG

Privilege Security Administrator, Administrator, Operator, Inspector

Syntax Description	`show mrme-service imsi-sticky imsi` *imsi_value* `[	{ grep` *grep_options* `| more }]`

imsi *imsi_value*

Specifies the International Mobile Subscriber Identity (IMSI) value.

imsi_value must be an integer from 1 to 15 digits.

| { grep *grep_options* | more }

Pipes (sends) the output of this command to the specified command. You must specify a command to which the output of this command will be sent.

For details on the usage of **grep** and **more**, refer to the *Regulating a Command's Output* section of the *Command Line Interface Overview* chapter.

Usage Guidelines	Use this command to display configuration and statistical information of the IMSI to session manager mapping (if available) in the mapping table of the IPSG manager.

Example

```
show mrme-service imsi-sticky imsi 123456789 all
```

show mrme-service mac-sticky

Displays configuration and statistical information of the User Equipment (UE) MAC address to IMSI mapping (if available) in the mapping table of the IPSG manager.

Product	SaMOG
Privilege	Security Administrator, Administrator, Operator, Inspector
Syntax Description	`show mrme-service mac-sticky mac` *mac_address* `[	{ grep` *grep_options* `| more }]`

mac *mac_address*

Specifies the MAC address.

mac_address must be an alpha-numeric string of 1 to 15 characters and should not be separated by a colon or hyphen.

| { grep *grep_options* | more }

Pipes (sends) the output of this command to the specified command. You must specify a command to which the output of this command will be sent.

For details on the usage of **grep** and **more**, refer to the *Regulating a Command's Output* section of the *Command Line Interface Overview* chapter.

Usage Guidelines   Use this command to display the configuration and statistical information of the User Equipment (UE) MAC address to IMSI mapping (if available) in the mapping table of the IPSG manager.

Example

```
show mrme-service mac-sticky mac 001d33227310
```

show mseg-config

This command is not supported in this release.

show mseg-service

This command is not supported in this release.

show multicast-sessions

Displays information for multicast sessions defined by the specified keywords.

Product	PDSN
	GGSN
Privilege	Security Administrator, Administrator, Operator, Inspector
Command Modes	Exec
	The following prompt is displayed in the Exec mode:
	[local]*host_name*#
Syntax Description	**show multicast-sessions [** *command_keyword* **] [** *filter_keywords* **] [	{ grep** *grep_options* **| more }**

command_keyword

The following keywords are base commands that each have a distinct display output. Only one keyword can entered on the command line.

debug-info { callid *id* | flowid *id* }

Displays internal call troubleshooting information for multicast sessions defined by the specified keywords.

callid *id:* Displays subscriber information for the call specified as an 8-digit hexadecimal number.

flowid *id:* Displays information for a specific BCMCS flow, defined by The flow ID as a hexadecimal number.

full

Displays all available multicast session information. The following filter keywords are valid for this command: active, all, callid, card-num, dormant, flowid, flowid-type, mcast-address, pcf, pdsn-service, grep, more

summary

Only displays a summary of multicast session information. The following commands are valid for this command: active, all, callid, card-num, dormant, flowid, flowid-type, mcast-address, pcf, pdsn-service, grep, more

filter_keywords

The following keywords are filters that modify or filter the output of the Command Keywords. Not all filters are available for all Command Keywords. Multiple Filter Keywords can be entered on a command line.

When multiple Filter Keywords are specified, the output conforms to all of the Filter Keywords specifications.

active

Only displays information for multicast sessions that are currently active.

all

If no keywords are specified before **all**, information for all multicast sessions is displayed. If keywords are specified before **all**, all information is displayed with no further options being allowed.

callid *id*

Displays multicast session information for the call specified by *id.* The call must be specified as an 8-digit hexadecimal number.

card-num *card_num*

The slot number of the processing card by which the subscriber session is processed. *card_num* is a slot number from 1 through 7 or 10 through 16 on the ASR 5000, or 1 through 4 or 7 through 10 on the ASR 5500.

dormant

Shows information for subscriber sessions that are dormant (not transmitting or receiving data).

flowid *id*

Displays information for a specific BCMCS flow, defined by *id.* The flow ID must be a hexadecimal number.

flowid-type [flow | program]

Displays information for multicast sessions according to the type of flow.

flow: Shows all multicast sessions for the flow ID type "flow".

program: Shows all multicast sessions for the flow ID type "program".

mcast-address *ipv4_address*

Show multicast sessions for a specific multicast address. Must be followed by the IP address of an interface, using IPv4 dotted-decimal notation.

pcf *ipv4_address*

Displays information for multicast sessions connected via the packet control function, defined by *ipv4_address*. The address must be specified using IPv4 dotted-decimal notation.

pdsn-service *svc_name*

Displays information for multicast session connected to the packet data service *svc_name.*The packet data service must have been previously configured and expressed as an alphanumeric string of 1 through 63 characters.

| { grep *grep_options* **| more }**

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

Please refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter for details on the usage of **grep** and **more**.

Usage Guidelines   Use this command to view information about multicast sessions.

The output of this command may be considered for part of a periodic system auditing program by verifying active and dormant sessions.

Example

The following command displays the all broadcast-multicast sessions active in a context/system:

```
show multicast-sessions all
```

☞

Important   Output descriptions for commands are available in the *Statistics and Counters Reference*.

show network-requested-pdp-context

Displays information for the specified network-requested packet data protocol (PDP) context.

Product   GGSN

Privilege   Security Administrator, Administrator, Operator, Inspector

Command Modes   Exec

The following prompt is displayed in the Exec mode:

```
[local]host_name#
```

Syntax Description	`show network-requested-pdp-context imsi` *`imsi_value`*

imsi *imsi_value*

Specifies that information will be displayed for a particular International Mobile Subscriber Identity (IMSI). *imsi_value* is an integer from 1 to 15 digits.

Usage Guidelines	USe this command to display information pertaining to network-requested PDP contexts.

Example

The following command displays network-requested PDP context information for a subscriber with an IMSI of *123456789*:

`show network-requested-pdp-context imsi 123456789`

show network-service-entity

Displays information regarding the network service entities (NSEs) in the network.

Product	SGSN

Privilege	Security Administrator, Administrator, Operator, Inspector

Command Modes	Exec

The following prompt is displayed in the Exec mode:

`[local]host_name#`

Syntax Description	`show network-service-entity { consolidated-status	fr-config [peer-nsei` *`nsei`*`]	ip-config [nsvl { all	instance` *`value` *`} }`

consolidated-status

Displays Network Service Virtual Connection (NSVC) status information for all network service entities in the network. This keyword is particularly useful for troubleshooting.

fr-config [peer-nsei *nsei*]

Displays network service configurations for NSEs using Frame Relay configurations.

peer-nsei *nsei* limits the display to a specific peer NSE identified as an integer from 0 through 65535.

ip-config [nsvl { all | instance *value* }

Displays network service configurations for NSEs using IP configurations.

Including the **nsvl** keyword limits the display to all or a single (instance 0 to 3) of a network service virtual link.

Usage Guidelines	Use this command to display NSE information pertaining to the NSVCs of the NSEs in the networks or NSEs configured for Frame Relay or IP.

Example

The following command displays the status of all the NSVCs for all the NSEs in the network.

```
show network-service-entity consolidated-status
```

show npu arp

Displays an Address Resolution Protocol (ARP) for a specified VPN identifier.

Product	ASR 5000 only
Privilege	Security Administrator, Administrator, Operator, Inspector
Command Modes	Exec

The following prompt is displayed in the Exec mode:

```
[local]host_name#
```

Syntax Description   `show npu arp lookup vpnid` *identifier* `nexthop` *ip_address* `slot` *slot_number*

identifier

Specifies a valid VPN identifier as an integer from 0 through 2114.

nexthop *ip_address*

Specifies a valid nexthop IP address in IPv4 dotted decimal or IPv6 colon-separated-hexadecimal notation.

slot *slot_number*

Specifies the slot number of the card for which the lookup is being form. *slot* is one of the following integers: 1, 2, 8 or 9.

Usage Guidelines   Use this command to perform an aRP lookup of a valid VPNid.

Example

The following command displays ARP lookup information for VPN 234:

```
show npu arp lookup vpnid 234 nexthop 209.165.200.225 slot 8
```

show npu error-counters

Displays packet error counters.

Product	ASR 5000 only

Privilege	Security Administrator, Administrator, Operator, Inspector
Command Modes	Exec

The following prompt is displayed in the Exec mode:

`[local]host_name#`

Syntax Description　　**show npu error-counters [| { grep** *grep_options* **| more }]**

| { grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of **grep** and **more**, refer to the *Regulating a Command's Output* section of the *Command Line Interface Overview* chapter.

Usage Guidelines　　View network timing protocol information to troubleshooting system clock issues by displaying the associations and status of the local NTP client.

Example

The following displays the NPU information.

```
show npu error-counters
show npu error-counters |grep    qwe
```

show npu tm

Displays queue status and performance statistics from the Traffic Manager (TM) component of an MIO NPU.

Product	ASR 5500 only
Privilege	Security Administrator, Administrator, Operator, Inspector
Command Modes	Exec

The following prompt is displayed in the Exec mode:

`[local]host_name#`

Syntax Description　　**show npu tm { queue** *card/cpu/npu* **[mode { both | hex | text }] | statistics** *card/cpu/npu* **[reset] [| { grep** *grep_options* **| more }]**

queue [mode { both | hex | text }]

Displays the TM queuing information for the specified NPU. The **mode** option allows you to specify hexadecimal, ASCII text or both types of display values.

statistics [reset]

Displays TM-related operational statistics. The **reset** option allows you to clear the statistical counters.

card/cpu/npu

Specifies the card slot (5 or 6), CPU number (0), and NPU number (1 through 4).

|{ grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of **grep** and **more**, refer to the *Regulating a Command's Output* section of the *Command Line Interface Overview* chapter.

Usage Guidelines Use this command to display queue status and performance statistics from the Traffic Manager (TM) component of an MIO NPU.

Example

The following command displays cumulative TM statistics for all NPUs associated with CPU 0 on the MIO in slot 5:

```
show npu tm statistics 5/0
```

The following command displays individual statistics for NPU 3 associated with CPU 0 on the MIO in slot 5.

```
show npu tm statistics 5/0/3
```

show npu utilization

Displays NPU utilization information.

Product ASR 5000, ASR 5500, VPC

Privilege Security Administrator, Administrator, Operator, Inspector

Command Modes Exec

The following prompt is displayed in the Exec mode:

[local]*host_name*#

Syntax Description **show npu utilization table [| { grep** *grep_options* **| more }]**

|{ grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of **grep** and **more**, refer to the *Regulating a Command's Output* section of the *Command Line Interface Overview* chapter.

Usage Guidelines Displays NPU manager state table information.

For the VPC, this command displays IFTASK core statistics for each active and standby SF. Statistics are reported for the past five seconds, past five minutes and past 15 minutes.

Example

The following displays the NPU information.

show npu utilization table

show ntp

Displays the network timing protocol (NTP) associations and status.

Product	All
Privilege	Security Administrator, Administrator, Operator, Inspector
Command Modes	Exec The following prompt is displayed in the Exec mode: `[local]host_name#`
Syntax Description	**show ntp { associations	status } [address** *ip_address* **] [	{ grep** *grep_options* **| more }]**

associations

Displays the current NTP server associations and related statistics.

status

Displays the client permeates configured and the synchronization status.

address *ip_address*

Specifies the IP address of an NTP server/client in the current context in IPv4 dotted-decimal notation.

| { grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of **grep** and **more**, refer to the *Regulating a Command's Output* section of the *Command Line Interface Overview* chapter.

Usage Guidelines	View network timing protocol information to troubleshooting system clock issues by displaying the associations and status of the local NTP client.

Example

The following displays the NTP associations and status, respectively.

```
show ntp associations
show ntp status
```

☞

Important　Output descriptions for commands are available in the *Statistics and Counters Reference*.

show nw-reachability server

Displays the configuration of network reachability servers for the current context.

Product　HA

Privilege　Security Administrator, Administrator, Operator, Inspector

Command Modes　Exec

The following prompt is displayed in the Exec mode:

[local]*host_name*#

Syntax Description　**show nw-reachability server { all | ipv4-only |ipv6-only | name** *server_name* **}**

all

Displays configuration information for all network reachability servers in the current context.

ipv4-only

Displays IPv4 Network Reachability Detection servers.

ipv6-only

Displays IPv6 Network Reachability Detection servers.

name server_name

Displays configuration information for an existing network reachability server specified as an alphanumeric string of 1 through 15 characters.

Usage Guidelines　Use this command to display configuration information on network reachability servers configured in the current context.

Example

The following command displays information on all network reachability servers in the current context:

show nw-reachability server all

☞

Important   Output descriptions for commands are available in the *Statistics and Counters Reference*.

show operator-policy

Displays the information configured for an operator policy.

Product	MME
	SAEGW
	S-GW
	SGSN
Privilege	Inspector
Command Modes	Exec

The following prompt is displayed in the Exec mode:

```
[local]host_name#
```

Syntax Description

```
show operator-policy { all | full { all | name op_policy_name } | name
op_policy_name } [ | { grep grep_options | more } ]
```

all

Displays a list of all operator policies configured on the system.

full { all | name op_policy_name }

full:Displays a full set of available information for the specified operator policy (policies).

all: Displays a full set of available information for all operator policies configured on the system.

name *op_policy_name*: Displays a full set of available information for an existing operator policy specified as an alphanumeric string of 1 through 64 characters.

name op_policy_name

Displays a full set of available information for an existing operator policy specified as an alphanumeric string of 1 through 64 characters.

| { grep grep_options | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of **grep** and **more**, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

Usage Guidelines   Use this command to display information for operator policies configured on the system. Operator policies are configured through the Global Configuration Mode and in the Operator Policy Configuration Mode. For more information regarding operator policy commands, refer to the *Operator Policy Configuration Mode Commands* chapter.

Example

The following command displays all available information for an operator policy named *policy-5*:

show operator-policy full name policy-5

show orbem

Displays information and statistics for the Object Request Broker Element Manager (ORBEM) interface in the current context.

Product   All

Privilege   Security Administrator, Administrator, Operator, Inspector

Command Modes   Exec

The following prompt is displayed in the Exec mode:

[local]*host_name*#

Syntax Description   **show orbem { client { id** *client_name* **| table } | event-notif-service filters | session { id** *session_name* **| table } | status } [| { grep** *grep_options* **| more }]**

client { id *client_name* | table }

Indicates the Common Object Request Broker Architecture (CORBA) client information is to be displayed. The keyword **table** is used to output to the display information on all configured clients. The keyword **id** is used to specify a specific client for which information is to be displayed specified as *client_name*.

client_name must refer to an existing client which is found using the **table** keyword option.

event-notif-service filters

Displays information pertaining to filters configured for the ORB Notification Service.

☞

Important   In 18.0 and later releases, this keyword is obsolete.

session { id *session_name* | table }

Indicates session information is to be displayed. The keyword **table** is used to output to the display information on all configured clients. The keyword **id** is used to specify a specific session for which information is to be displayed specified as *session_name*.

session_name must refer to an existing session which is found using the **table** keyword option.

status

Indicates that the ORBEM server status information is to be displayed.

| { grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of **grep** and **more**, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

Usage Guidelines Display current sessions when ORBEM system response may appear sluggish. This command is also useful in periodic verification of the server status.

Example

The following commands will display the information for all clients.

show orbem client table

The following commands display the information for the *clientName* and *sessionID*, respectively:

show orbem client id *clientName*
show orbem session id *sessionId*

The following command displays the ORBEM server status:

show orbem status

The following command displays the information for all sessions:

show orbem session table

☞

Important Output descriptions for commands are available in the *Statistics and Counters Reference*.

show patch progress

Displays the status of the on-going software patch installation.

Product All

Privilege Security Administrator, Administrator, Operator, Inspector

Command Modes Exec

The following prompt is displayed in the Exec mode:

[local]*host_name*#

Syntax Description	`show patch progress`
Usage Guidelines	Use this command to show the status of an on-going software patch installation.

☞

Important	Software Patch Upgrades are not supported in this release.

show pcc-af service

Displays the statistical and configuration information of configured Policy and Charging Control- Application Function (PCC-AF) services configured in a context.

Product	IPCF
Privilege	Security Administrator, Administrator, Operator, Inspector
Command Modes	Exec
	The following prompt is displayed in the Exec mode:
	`[local]host_name#`
Syntax Description	`show pcc-af service [statistics] { all	name pcc_af_svc_name	summary }` `[	{ grep grep_options	more }]`

all

all: displays information for all configured PCC-AF services.

name *pcc_af_svc_name*

Displays information only for an existing PCC-AF service specified as an alphanumeric string of 1 through 79 characters

statistics

Displays the statistical information for a specific service or all PCC-AF services configured in a context.

summary

Displays the summarized output of this command.

| { grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of the **grep** and **more** commands, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

Usage Guidelines	Use this command to display the statistical and configuration information of configured PCC-AF services configured in a context.

Display can further be filtered for specific PCC-AF service name or summarized output of the command.

Example

The following command displays the information for the PCC-AF service named *pccApp1* in summarized output:

```
show pcc-af service name pccApp1 summary
```

☞

Important Output descriptions for commands are available in the *Statistics and Counters Reference*.

show pcc-af session

Displays the active/dormant session information about Policy and Charging Control- Application Function (PCC-AF) service instances configured and running on this system based on different filter criteria.

Product	IPCF
Privilege	Inspector
Command Modes	Exec

The following prompt is displayed in the Exec mode:

```
[local]host_name#
```

Syntax Description
```
show pcc-af sessions [ full | summary] [ all ] [ apn | call-id call_id |
ip-address pcc_af_ip_address | service pcc_af_svc_name | sipuri sip_uri ] ] [ |
{ grep grep_options | more } ]
```

full

Displays the full information of specific registered IP Connectivity Access Network (IP-CAN) session(s) on a PCC-AF service instance running on system. Display can be filtered based on given filtering criteria.

summary

Displays summarized information for specific registered IP-CAN session(s) on a PCC-AF service instance running on system. Display can be filtered based on given filtering criteria.

all

Displays summarized or full information for all registered IP-CAN session(s) on a PCC-AF service instance running on system. Display can be filtered based on given filtering criteria.

apn *apn_name*

Displays information for PCC-AF service sessions connected via an existing APN at the Policy and Charging Enforcement Function (PCEF).

ip-address *pcc_af_ip_address*

Filters the display of full or summarized session statistics for IP-CAN session(s) based on the IP address of a registered PCC-AF server on a PCC-AF service instance.

pcc_af_ip_address is an IP address expressed in IPv4 dotted-decimal or IPv6 colon-separated-hexadecimal notation.

call-id *call_id*

Filters the display of full or summarized session statistics for IP-CAN session(s) based on the registered call ID on a PCC-AF service instance for the IP-CAN session subscriber in 8-digit hexadecimal format.

pcc-af-service *pcc_af_svc_name*

Filters the display of session statistics for a registered IP-CAN session(s) based on an existing PCC-AF service name specified as an alphanumeric string of 1 through 63 characters.

sipuri *sip_uri*

Displays summarized or full information for IP-CAN session(s) based on the SIP-URI on a PCC-AF service instance.

sip_uri is the Session Initiation Protocol (SIP) addressing schema to call another person. It resembles an e-mail address and is written in the SIP URI format as *sip:x@y:Port* format, where *x* = username and *y* = host (domain or IP)

|{ grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of the **grep** and **more** commands, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

Usage Guidelines   Use this command to view the session statistics of all or specific registered IP-CAN session(s) or in selected part of user session for PCC-AF services configured and running on this system.

Example

The following command displays the summarized session statistics for all registered IP-CAN sessions on the PCC-AF service named *pccAF1*:

```
show pcc-af sessions summary all service pccAF1
```

☞

Important   Output descriptions for commands are available in the *Statistics and Counters Reference*.

show pcc-policy service

Displays the statistical and configuration information of configured PCC-Policy services configured in a context.

Product	IPCF
Privilege	Security Administrator, Administrator, Operator, Inspector
Command Modes	Exec

The following prompt is displayed in the Exec mode:

`[local]host_name#`

Syntax Description

```
show pcc-policy service [ statistics] { all | name pcc_plcy_svc_name | summary
 } [ | { grep grep_options | more } ]
```

all

all: displays information for all configured PCC-Policy services.

name *pcc_plcy_svc_name*

Displays information for an existing PCC-Policy service specified as an alphanumeric string of 1 through 79 characters.

statistics

Displays statistical information for a specific or all PCC-Policy services configured in a context.

summary

Displays summarized output for this command.

| { grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of the **grep** and **more** commands, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

Usage Guidelines

Use this command to display the statistical and configuration information of configured PCC-Policy services configured in a context.

Display can further be filtered for specific PCC-Policy service name or summarized output of the command.

Example

The following command displays the information for the PCC-Policy service named *pcc_policy1* in summarized output:

```
show pcc-policy service name pcc_policy1 summary
```

☞

Important   Output descriptions for commands are available in the *Statistics and Counters Reference*.

show pcc-policy session

Displays active/dormant session information about PCC-Policy service instances configured and running on this system based on different filter criteria.

Product

IPCF

Privilege

Inspector

Command Modes

Exec

The following prompt is displayed in the Exec mode:

[local]*host_name*#

Syntax Description

```
show pcc-policy sessions [ full | summary ] [ all ] [ apn | call-id call_id
 | imsi imsi_id | ip-address pcc_pcef_ip_address | service pcc_plcy_svc_name ] ]
[ | { grep grep_options | more } ]
```

full

Displays full information for a specific registered IP Connectivity Access Network (IP-CAN) session(s) on a PCC-Policy service instance running on system. Display can be filtered based on given filtering criteria.

summary

Displays summarized information for a specific registered IP-CAN session(s) on a PCC-Policy service instance running on system. Display can be filtered based on given filtering criteria.

all

Displays summarized or full information for all registered IP-CAN session(s) on a PCC-Policy service instance running on system. Display can be filtered based on given filtering criteria.

apn *apn_name*

Displays information for PCC-Policy service sessions connected via an existing APN on the PCEF.

imsi *imsi_id*

Displays summarized or full information for IP-CAN session(s) based on the International Mobile Subscriber Identity (IMSI) of a subscriber in a PCC-Policy service instance.

imsi_id is the IMSI and must be a 15-character field which identifies the subscriber's home country and carrier.

ip-address *pcc_pcef_ip_address*

Filters the display of full or summarized session statistics for IP-CAN session(s) based on the IP address of the registered PCEF node specified in IPv4 dotted-decimal or IPv6 colon-separated-hexadecimal notation.

call-id *call_id*

Filters the display of full or summarized session statistics display for an IP-CAN session(s) based on the registered call ID in a PCC-Policy service instance.

call_id must be an existing call identifier in the IP-CAN session subscriber expressed in 8-digit hexadecimal format.

pcc-policy-service *pcc_plcy_svc_name*

Filters the display of session statistics for registered IP-CAN session(s) based on an existing PCC-Policy service name specified as an alphanumeric string of 1 through 63 characters.

|{ grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of the **grep** and **more** commands, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

Usage Guidelines	Use this command to view the session statistics for all or a specific registered IP-CAN session(s) for PCC-Policy services configured and running on this system.

Example

The following command displays summarized session statistics for all registered IP-CAN sessions on the PCC-Policy service named *pccPolicy1*:

```
show pcc-policy sessions summary all service pccPolicy1
```

☞

Important	Output descriptions for commands are available in the *Statistics and Counters Reference*.

show pcc-service

Displays the configuration information for Policy and Charging Control (PCC) services configured in a context.

Product	IPCF
Privilege	Security Administrator Operator, Inspector
Command Modes	Exec

The following prompt is displayed in the Exec mode:

```
[local]host_name#
```

Syntax Description	**show pcc-service { summary	all	service-name** *pcc_svc_name* **} [	{ grep** *grep_options* **| more }]**

all

all: displays information for all configured PCC services.

service-name *pcc_svc_name*

Displays information for an existing PCC service specified as an alphanumeric string of 1 through 79 characters.

summary

Displays the summarized output of this command.

|{ grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of the **grep** and **more** commands, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

Usage Guidelines	Use this command to display statistical and configuration information for configured PCC services in a context. Display can further be filtered for a specific PCC- service name.

Example

The following command displays the information for the PCC service named *pcc_svc1*:

show pcc-service service-name pcc_svc1 summary

☞

Important	Output descriptions for commands are available in the *Statistics and Counters Reference*.

show pcc-service session

Displays active/dormant session information about Policy and Charging Control (PCC) service instances configured and running on this system based on different filter criteria.

Product	IPCF
Privilege	Inspector
Command Modes	Exec

The following prompt is displayed in the Exec mode:

[local]*host_name*#

Syntax Description	**show pcc-service sessions [full	summary] [all emergency-only] [call-id** *call_id* **| instance** *instance_id* **| service-name** *pcc_svc_name* **]] [	{ grep** *grep_options* **| more }]**

full

Displays full information for a specific registered IP Connectivity Access Network (IP-CAN) session(s) in a PCC service instance running on system. Display can be filtered based on given filtering criteria.

summary

Displays summarized information for a specific registered IP-CAN session(s) in a PCC service instance running on system. Display can be filtered based on given filtering criteria.

all

Displays summarized or full information for all registered IP-CAN sessions on a PCC service instance running on system. Display can be filtered based on given filtering criteria.

emergency-only

Displays summarized or full information for all IP-CAN sessions on a PCC service instance running on system which are using emergency APN for emergency services. Display can be filtered based on given filtering criteria.

instance *instance_id*

Displays summarized or full information for an IP-CAN session(s) based on the PCC service instance identifier on an IPCF/PCRF node specified as an integer from 1 through 512.

service-name *pcc_svc_name*

Filters the display of session statistics display of registered IP-CAN session(s) based on an existing PCC service name specified as an alphanumeric string of 1 through 63 characters.

| { grep *grep_options* **| more }**

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of the **grep** and **more** commands, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

Usage Guidelines	Use this command to view session statistics for all or a specific registered IP-CAN session(s) in PCC services configured and running on this system.

Example

The following command displays summarized session statistics for all registered IP-CAN sessions in the PCC service named *pccsvc1*:

show pcc-service sessions summary service-name pccsvc1

☞

Important   Output descriptions for commands are available in the *Statistics and Counters Reference*.

show pcc-service statistics

Displays the statistical information for Policy and Charging Control (PCC) services configured in a context.

Product   IPCF

Privilege   Security Administrator, Administrator, Operator, Inspector

Command Modes   Exec

The following prompt is displayed in the Exec mode:

`[local]host_name#`

Syntax Description `show pcc-service statistics { all | service-name pcc_svc_name [ profile-name`
`pcc_profile_name ] } [ | { grep grep_options | more } ]`

all

Displays statistical information for all configured PCC services on a system.

service-name *pcc_svc_name*

Displays information for an existing PCC service specified as an alphanumeric string of 1 to 79 characters. It can be further filtered by the PCC profile name used in an IP-CAN session.

profile-name *pcc_profile_name*

Displays information for an existing PCC profile in an IP-CAN session.

|{ grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of the **grep** and **more** commands, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

Usage Guidelines Use this command to display the statistical information for PCC services configured in a context.

Display can further be filtered for a specific Profile name used in a session.

Example

The following command displays the information for the PCC service named *pcc_svc1* using PCC profile named *pcc_profile_default*:

```
show pcc-service statistics service-name pcc_svc1 profile-name
pcc_profile_default
```

☞

Important Output descriptions for commands are available in the *Statistics and Counters Reference*.

show pcc-sp-endpoint

Displays statistical and configuration information for a configured PCC Sp-Endpoint instance in a context.

Product	IPCF
Privilege	Security Administrator, Administrator, Operator, Inspector
Command Modes	Exec
	The following prompt is displayed in the Exec mode:
	[local]*host_name*#

Syntax Description   **show pcc-sp-endpoint [statistics] [all | name** *sp_endpt_name*] **[| [grep** *grep_options* **| more]] [connection [all | name** *sp_endpt_name*]]

all

Displays statistical information for all configured PCC Sp-Endpoint instances on a system.

name *sp_endpt_name*

Displays information for an existing PCC Sp-Endpoint instance specified as an alphanumeric string of 1 through 79 characters.

|{grep *grep_options* **| more}**

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of **grep** and **more** commands, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

connection

Displays statistics for the configured connection values along with peer selection success and failures.

Usage Guidelines   Use this command to display statistical information and peer name for a configured PCC Sp-Endpoint instance in a context.

☞

Important If the secondary peer is not configured, then N/A is printed in the output.

Display can further be filtered for a specific PCC Sp-Endpoint instance used in a session.

Example

The following command displays statistical information for the PCC Sp-Endpoint instance named *Sp_Intf1*:

show pcc-sp-endpoint statistics name Sp_Intf1

☞

Important   Output descriptions for commands are available in the *Statistics and Counters Reference*.

show pcc-sp-endpoint connection

Displays statistical and configuration information for an Sp interface connection in a PCC Sp-Endpoint instance.

Product	IPCF
Privilege	Security Administrator, Administrator, Operator, Inspector
Command Modes	Exec

The following prompt is displayed in the Exec mode:

`[local]host_name#`

Syntax Description   **show pcc-sp-endpoint connection [all | name** *sp_endpt_name* **[peer** *sp_peer_name* **]] [| { grep** *grep_options* **| more }]**

all

Displays statistical information for all configured PCC Sp-Endpoint instances on a system.

name *sp_endpt_name*

Displays information for an existing PCC Sp-Endpoint instance specified as an alphanumeric string of 1 through 79 characters. It can further be filtered with an Sp Endpoint peer (SSC/SPR) name used for the IP Connectivity Access Network (IP-CAN) session.

peer *ssc_name*

Displays information only for the PCC Sp-Endpoint instance within an existing Subscriber Service Controller/Subscriber Profile Repository (SSC/SPR) as a peer for an IP-CAN session.

ssc_name is the name of the SSC/SPR node used by the Sp Endpoint interface.

| { grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of the **grep** and **more** commands, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

Usage Guidelines

Use this command to display statistical information for Sp interface connections in PCC Sp-Endpoint instances.

Display can further be filtered for a specific peer name (SSC/SPR).

Example

The following command displays the Sp interface connection related statistical information for the PCC Sp-Endpoint instance named *Sp_Intf1* using peer name *SSC1*:

```
show pcc-endpoint connection name Sp_Intf1 peer SSC1
```

☞

Important   Output descriptions for commands are available in the *Statistics and Counters Reference*.

show pdg-service

Displays configuration information about PDG services configured on the system.

Product

PDG/TTG

Privilege

Security Administrator, Administrator, Operator, Inspector

Command Modes

Exec

The following prompt is displayed in the Exec mode:

[local]*host_name*#

Syntax Description

```
show pdg-service { all | name service_name }
```

all

Displays information for all configured Packet Data Gateway/Tunnel Termination Gateway (PDG/TTG) services.

name *service_name*

Displays information only for an existing PDG service specified as an alphanumeric string of 1 through 63 characters.

| { grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of **grep** and **more**, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

Usage Guidelines	Use this command to display information for PDG services.

Example

The following command displays available information for all active PDG services:

show pdg-service all

show pdg-service statistics

Displays statistics for the Packet Data Gateway/Tunnel Termination Gateway (PDG/TTG) since the last **restart** or **clear** command. The output includes the number of each type of Extensible Authentication Protocol (EAP) messages.

Product	PDG/TTG
Privilege	Security Administrator, Administrator, Operator, Inspector
Command Modes	Exec

The following prompt is displayed in the Exec mode:

`[local]host_name#`

Syntax Description	**show pdg-service statistics [name** *service_name* **| peer-address** *ipv4_address* **]**

name service_name

Displays statistics for an existing PDG service specified an alphanumeric string of 1 through 63 characters.

peer-address ipv4_address

Displays statistics for a specific subscriber with the WLAN IP address specified in IPv4 dotted-decimal notation.

|{ grep grep_options | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of **grep** and **more**, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

Usage Guidelines	Use this command to display PDG service statistics.

Example

The following command displays statistics for all active PDG services:

show pdg-service statistics

show pdif-service

Displays configuration information about Packet Data Interworking Function (PDIF) services configured on the system.

Product

PDIF

Privilege

Security Administrator, Administrator, Operator, Inspector

Command Modes

Exec

The following prompt is displayed in the Exec mode:

```
[local]host_name#
```

Syntax Description

```
show pdif service { all [ counters ] | name name [ counters ] | statistics
 [ name name | peer-address address ] } [ | { grep grep_options | more } ]
```

all [counters]

Displays configuration information and statistical counters for all PDIF services in the system.

name *name* [counters]

Displays configuration information and statistical counters for an existing PDIF service specified as an alphanumeric string of 1 through 63 characters.

statistics [name *name* | peer-address *address*]

name *name*: Displays service statistics for a an existing PDIF service specified as an alphanumeric string of 1 through 63 characters.

peer-address *address*: Displays service statistics for a peer server IP address specified in IPv4 dotted-decimal notation.

| { grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of **grep** and **more**, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

Usage Guidelines

Use this command to display configuration information and statistics about PDIF services on the system.

Example

The following example displays configuration information about a PDIF service named *pdif23*:

```
show pdif service name pdif23
```

☞

Important   Output descriptions for commands are available in the *Statistics and Counters Reference*.

show pdn-connection-count

Displays the current number of PDN connections for each of the Restoration-Priority-Level values received from AAA across S6b interface.

Product	P-GW
	SAEGW

Privilege	Security Administrator, Administrator, Operator, Inspector

Command Modes	Exec
	The following prompt is displayed in the Exec mode:
	[local]*host_name*#

Syntax Description	**show pdn-connection-count restoration-priority-level {** *priority_level* **| all }**
	restoration-priority-level { *priority_level* | all }
	Restoration priority associated with PDN connection.
	priority_level: Restoration priority level must be an integer from 1 through 8.
	In StarOS 21.0 and later, priority levels 1 through 16 are supported.
	all: Displays the number of PDN connections associated with all restoration priorities.

Usage Guidelines	To distinguish between VoLTE enabled IMS PDN connections and non-VoLTE enabled IMS PDN connections, the P-GW supports receiving AVP "Restoration-Priority-Indicator" from AAA server over the S6b interface. The P-GW also provides KPIs based on the AVP value.

Example

The following command displays the number of PDN connections associated with restoration priority level 2:

show pdn-connection-count restoration-priority-level 2

show pdsn-service

Displays information for configured packet data services in the current context.

Product	PDSN

Privilege	Security Administrator, Administrator, Operator, Inspector
Command Modes	Exec

The following prompt is displayed in the Exec mode:

```
[local]host_name#
```

Syntax Description

```
show pdsn-service { all | name pdsn_name } [ pcf-status [ address ip_address
 | filter [ all | icmp-monitored | no-calls | summary | up ] ] ] [ | {
grep grep_options | more } ]
```

all | name *pdsn_name*

all: Displays information for all configured packet data services.

name *pdsn_name*: Displays information only for an existing PDSN service specified as an alphanumeric string of 1 through 79 characters.

pcf-status [address *ip_address* | filter [all | icmp-monitored | no-calls | summary | up]]

pcf-status: Displays summary information for all Packet Control Functions (PCFs).

address *ip_address:* Only lists information for the PCF with the IP address specified in IPv4 dotted-decimal notation.

filter: Filters the output so only the specified information is displayed. If a filter is specified with no keywords, summary information for all PCFs is displayed.

- **all**: Displays information for all the PCFs

- **icmp-monitored**: Displays information only for PCFs which are ICMP monitored

- **no-calls**: Displays information only for PCFs which have no active sessions

- **summary**: Displays only a summary of the status of the PCFs

- **up**: Displays information only for PCFs which are alive

| { grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of **grep** and **more**, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

Usage Guidelines

Show the PDSN service information for standard system monitoring or troubleshooting.

Example

The following will display the information for all configured services and *sampleService*, respectively:

```
show pdsn-service all
show pdsn-service name sampleService
```

show pdsnclosedrp-service

Displays information on configured Closed R-P services for the current context.

Product	PDSN
Privilege	Security Administrator, Administrator, Operator, Inspector
Command Modes	Exec
	The following prompt is displayed in the Exec mode:
	`[local]host_name#`
Syntax Description	`show pdsn-service { all	name name }`

all | name *name*

all: Displays information for all configured Closed R-P services.

name *name*: Displays information for an existing Closed R-P service specified as an alphanumeric string of 1 through 79 characters.

Usage Guidelines	Show the Closed R-P service information for standard system monitoring or troubleshooting.

Example

The following command displays information for the Closed R-P service named *SampleRP* and for all configured services, respectively.

```
show pdsn-service all
show pdsn-service name SampleRP
```

show peer-profile

Displays configuration of the specified peer profile.

Product	GGSN
	P-GW
	SAEGW
	S-GW
Privilege	Security Administrator, Administrator, Operator, Inspector
Command Modes	Exec
	The following prompt is displayed in the Exec mode:
	`[local]host_name#`

Syntax Description	`show peer-profile { all	full { all	name` *profile_name* `}	name` *profile_name* `} [	{ grep` *grep_options* `| more }]`

all

Displays a list of all peer profiles configured on the system, arranged by service type.

full { all | name *profile_name* }

Displays detailed peer profile configuration information.

all: Displays detailed configuration information for all peer profiles configured on the system.

name*profile_name*: Displays detailed configuration information for the specified peer profile.

profile_name is an alphanumeric string of 1 through 64 characters.

name *profile_name*

Lists the specified peer profile, and the service type to which it belongs.

profile_name is an alphanumeric string of 1 through 64 characters.

| { grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of **grep** and **more**, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

Usage Guidelines	Use this command to display configuration information for the peer profiles created on the system.

Refer to the **peer-profile** command in the *Global Configuration Mode Commands* chapter and the *Peer Profile Configuration Mode Commands* chapter for more information.

Example

The following command displays detailed configuration information for the *pp2* peer profile.

`show peer-profile full name pp2`

show pgw-service

Displays configuration information for PDN Gateway (P-GW) services on this system.

Product	P-GW
	SAEGW
Privilege	Inspector
Command Modes	Exec

The following prompt is displayed in the Exec mode:

`[local]`*`host_name`*`#`

Syntax Description

```
show pgw-service { all | name service_name | statistics { all | name
service_name } [ verbose ] } [ | { grep grep_options | more } ]
```

all

Displays configuration information for all P-GW services configured on this system.

name *service_name*

Displays configuration information for an existing P-GW service specified as an alphanumeric string of 1 through 63 characters.

statistics { all | name *service_name* **} [verbose]**

Displays P-GW service statistics.

all: Displays statistics for all P-GW services on the system.

name *service_name*: Displays statistics for an existing P-GW service specified as an alphanumeric string of 1 through 63 characters.

If **verbose** is also specified, the information is displayed in more detail.

| { grep *grep_options* **| more }**

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of **grep** and **more**, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

Usage Guidelines

Use this command to view configuration information for P-GW services on this system.

Example

The following command displays service statistics for the P-GW service named *pgw1*:

show pgw-service name pgw1

show plugin

Displays the current configuration of one or all plugin modules installed on the system. This command is associated with the dynamic software upgrade process.

Product

All

Privilege

Security Administrator, Administrator

Command Modes

Exec

The following prompt is displayed in the Exec mode:

`[local]`*host_name*`#`

Syntax Description

show plugin [*plugin_name* **]**

plugin_name

Filters the output by an existing plugin name expressed as an alphanumeric string of 1 through 16 characters.

Usage Guidelines

Displays the attribute settings, priority and version for one or all plugin modules. A plugin module is a shared object library that can be dynamically updated or rolled back. Refer to the *System Administration Guide* for additional information on dynamic software updates.

Example

The following command displays the configuration status of all plugin modules currently installed on the system:

show plugin

show port

Displays information on configured parameters and operational statistics for physical and logical ports in the system.

Product

All

Privilege

Security Administrator, Administrator, Operator, Inspector

Command Modes

Exec

The following prompt is displayed in the Exec mode:

`[local]`*host_name*`#`

Syntax Description

show port { datalink counters [*slot/port* **] | info [** *slot/port* **] [vlan** *vlan_id*
] | npu counters [*slot/port* **[tagged | untagged | vlan** *tag_id* **]] | table
| transceiver** *slot/port* **| utilization table [verbose] } [| { grep**
grep_options **| more }]
show port info {** *slot/port* **} [vlan** *vlan_id* **] [| { grep** *grep_options* **| more }
]
show port dinet**

datalink counters *slot/port*

Displays the physical layer information for all data links or only the one specified by the slot/port location of a previously configured port.

info [*slot/port*] [vlan *vlan_id*]

Displays detailed information for all ports within the chassis or only the one specified by slot/port location of a previously configured port.

vlan *vlan_id*: Displays detailed information about all Virtual Local Area Networks (VLANs) in the port/slot. If the optional vlan_id is not specified, this keyword displays port information for all VLANs in the slot/port location.

npu counters [*slot/port* [tagged | untagged | vlan *tag_id*]] | bound | unbound]

Displays the information for Network Processing Unit (NPU) ports. The information for all ports is output or only the one specified by the slot/port location of a previously configured port.

For ASR 5500 MIO ports, this command displays the combined statistics for the specified port and its paired port (virtual pair).

tagged: Display statistics for all tagged packets.

untagged: Display statistics for all untagged packets.

vlan *tag_id*: Display NPU counters for a previously configured VLAN ID.

bound: Displays individual and cumulative NPU port counters for the bound ports within the current context. If the command is invoked in the local context, all of the bound ports for all contexts and cumulative counter values for all contexts are displayed.

unbound: Displays individual and cumulative NPU port counters for all unbound ports within system.

table

Displays information for all physical ports on rear-installed cards with physical interfaces.

transceiver *slot/port*

Displays diagnostic information for all SFP+ transceivers connected to a specified subscriber traffic port on the MIO card.

utilization table [verbose]

Shows average port utilization in Mbps. The output is a table that lists the current utilization average, a 5-minute average, and a 15-minute average, for all enabled ports.

The **verbose** option displays port utilization with kilobyte accuracy using decimal points.

| { grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of **grep** and **more**, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

dinet

Displays the DI-network port statistics.

Usage Guidelines   Display port information for troubleshooting of network communications by viewing statistics and configuration information for physical ports.

Example

The following displays detailed information for port 1 in slot 17:

```
show port info 17/1
show port table
```

The following displays information for the data link port 33/1:

```
show port datalink counters 33/1
show port npu counters 33/1
```

The following displays detailed information for port 11 in slot 5:

```
show port info 5/11
show port table
```

☞

Important   Output descriptions for commands are available in the *Statistics and Counters Reference*.

show power

Displays information about the power on/off status of individual cards and the operating status of installed power filter units.

Product   All

Privilege   Security Administrator, Administrator, Operator, Inspector

Command Modes   Exec

The following prompt is displayed in the Exec mode:

```
[local]host_name#
```

Syntax Description   **show power [all | chassis |** *card_num* **] [| { grep** *grep_options* **| more }]**

all | chassis | *card_num*]

all: Displays power on/off state for all cards in the chassis.

chassis: Displays the operating status of installed power filter units. This is the default setting.

card_num: Displays the power on/off state for a single card specified an integer from 1 through 48 for the ASR 5000 or 1 through 20 for the ASR 5500.

| { grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of **grep** and **more**, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

| **Usage Guidelines** | View power source information to quickly check the power for all cards within a chassis. |

☞

| **Important** | On some platforms, only **show power** is supported with no other keywords or variables. |

Example

The following displays power supply status for the chassis:

show power

The following command displays the power status for all slots:

show power all

show ppp

Displays the point-to-point protocol (PPP) information, detailed or summarized, for one or all connections by the use of filtering options.

| **Product** | PDSN |
| | GGSN |

| **Privilege** | Security Administrator, Administrator, Operator, Inspector |

| **Command Modes** | Exec |

The following prompt is displayed in the Exec mode:

[local]*host_name*#

| **Syntax Description** | **show ppp { [counters | full | summary] { all | callid** *call_id* **| imsi** *id* **| msid** *ms_id* **| username** *user_name* **} | statistics [pcf-address [** *pcf_ip_addr* **| all] | pdsn-service** *pdsn_name* **] } [| { grep** *grep_options* **| more }]** |

counters | full | summary

Filters the output for the level and type of information with the options described below.

counters: Displays PPP statistics.

full: Displays all available information.

summary: Displays only a summary of available information.

all | callid *call_id* | imsi *imsi_id* | msid *ms_id* | username *user_name* }]

all: Displays all available information.

callid *call_id*: Displays PPP information only for the call ID specified as a 4-digit hexadecimal number.

imsi *id*: Displays PPP information only for the subscriber with the specified IMSI (International Mobile Subscriber Identity). *id* is a 15-digit field which identifies the subscriber's home country and carrier.

msid *ms_id*: Displays information for a mobile subscriber ID specified as 7 to 16 digits for an IMSI, MIN, or RMI.

username *user_name*: Displays user PPP information for the specified username.

statistics [pcf-address [*pcf_ip_addr* | all] | pdsn-service *pdsn_name*]

Displays statistics for all packet data services.

pcf-address [*pcf_ip_addr* | **all**]: Displays statistics only for the time the session is connected to the specified PCF (Packet Control Function) or for all PCFs. *pcf_ip_addr* must be specified using IPv4 dotted-decimal notation.

pdsn-service *pdsn_name*: Display statistics only for an existing PDSN service specified as an alphanumeric string of 1 through 63 characters.

| { grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of **grep** and **more**, refer to the *Regulating a Command's Output* section of the *Command Line Interface Overview* chapter in the *Command Line Interface Reference*.

Usage Guidelines View Point-to-Point Protocol information to support troubleshooting subscriber connections by viewing information on PPP connections for a specific subscriber.

Example

The following displays the PPP summary for all connections.

```
show ppp summary all
```

The following outputs the point-to-point detailed information for the user *user1*.

```
show ppp full username user1
```

The following command displays the standard information for the call with ID *FF0E11CD*.

```
show ppp callid ff0e11cd
```

The following command displays the PPP statistics for *pdsn1*.

```
show ppp statistics pdsn-service pdsn1
```

The following command provides summarized information for the PPP statistics.

```
show ppp
```

☞

Important Output descriptions for commands are available in the *Statistics and Counters Reference*.

show prepaid 3gpp2

Displays prepaid accounting information for all services or only the service specified.

Product	PDSN
	GGSN
Privilege	Security Administrator, Administrator, Operator, Inspector
Command Modes	Exec
	The following prompt is displayed in the Exec mode:
	[local]*host_name*#

Syntax Description

```
show prepaid 3gpp2 statistics all [ | { grep grep_options | more } ]
show prepaid 3gpp2 statistics { ggsn-service | ha-service | lns-service
| pdsn-service | pdsnclosedrp-service } { all | name service_name } [ | {
grep grep_options | more } ]
show prepaid 3gpp2 statistics per-service-summary } [ | { grep grep_options
 | more } ]
```

all

Displays prepaid statistics for all services.

ggsn-service

Displays statistics for GGSN service(s).

ha-service

Displays statistics for HA service(s).

lns-service

Displays statistics for LNS service(s).

pdsn-service

Displays statistics for PDSN service(s).

pdsnclosedrp-service

Displays statistics for PDSN Closed-RP service(s).

{ all | name _service_name_ }

all: Displays statistics for all services of the specified type.

name *service_name*: Displays statistics for an existing service specified an alphanumeric string of 1 through 63 characters.

per-service-summary

Displays prepaid statistics per service summary for all services.

| { grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of **grep** and **more**, refer to the *Regulating a Command's Output* section of the *Command Line Interface Overview* chapter in the *Command Line Interface Reference*.

Usage Guidelines   Displays Pre-paid statistics for a particular named service or for all services.

Example

To display statistics for a PDSN service named *PDSN1*, enter the following command:

show prepaid 3gpp2 statistics pdsn-service name *PDSN1*

☞

Important   Output descriptions for commands are available in the *Statistics and Counters Reference*.

show prepaid wimax

This command displays prepaid WiMAX accounting information for all services or only the service specified.

Product   ASN-GW

Privilege   Inspector

Command Modes   Exec

The following prompt is displayed in the Exec mode:

[local]*host_name*#

Syntax Description   **show prepaid wimax statistics { all | asngw-service { all | name** *service_name* **} | ha-service { all | name** *service_name* **} | per-service-summary } [| { s** *grep_options* **| more }]**

all

This keyword displays prepaid statistics for all services.

asngw-service

Displays prepaid statistics for Access Service Network-Gateway (ASN-GW) service(s).

ha-service

Displays prepaid accounting statistics for Home Agent (HA) service(s).

{ all | name *service_name* }

all: Displays statistics for all services of the specified type.

name *service_name*: Displays statistics for an existing service specified as an alphanumeric string of 1 through 63 characters.

per-service-summary

Displays prepaid statistics per service summary for all services.

| { grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of **grep** and **more**, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

Usage Guidelines	Use this command to display prepaid WiMAX accounting statistics for named service or for all services.

Example

The following command displays prepaid WiMAX accounting statistics for an ASN-GW service named *asn1*:

```
show prepaid wimax statistics asngw-service name asn1
```

☞

Important	Output descriptions for commands are available in the *Statistics and Counters Reference*.

show process status

Displays information on process listings in the system.

Product	All
Privilege	Security Administrator
Command Modes	Exec
	The following prompt is displayed in the Exec mode:
	[local]*host_name*#
Syntax Description	**show process status [card** *card_number* **[cpu** *cpu_number***]]**

card *card_number*

Displays the process listing for the specific card in the system.

cpu *cpu_number*

Displays the process listing for the specific card and CPU in the system.

Usage Guidelines   Displays information on process listings in the system.

> **Note**   Only the Security Administrator can run this command.

Example

The following displays the list of processes running on card 1 on cpu 0:

```
show process status card 1 cpu 0
```

> **Important**   Output descriptions for commands are available in the *Statistics and Counters Reference*.

show profile-id-qci-mapping

Displays QoS Class Identifier-Radio Access Network (QCI-RAN) mapping tables configured on this system.

Product   HSGW

Privilege   Inspector

Command Modes   Exec

The following prompt is displayed in the Exec mode:

[local]*host_name*#

Syntax Description   `show profile-id-qci-mapping table { all | name` *table_name* `} [ | { grep` *grep_options* `| more } ]`

all

Displays information for all QCI-RAN mapping tables configured on this system.

name *table_name*

Displays information for an existing QCI-RAN table specified as an alphanumeric string of 1 through 63 characters.

| { grep *grep_options* | more }

Pipes (sends) the output of the command to the command specified. You must specify a command to which the output will be sent.

For details on the usage of **grep** and **more**, refer to the *Regulating a Command's Output* section in the *Command Line Interface Overview* chapter.

Usage Guidelines   Use this command to display the contents of a specific QCI-RAN mapping table or all mapping tables configured on this system.

Example

The following command displays the contents of a QCI-RAN mapping table named *table1*:

```
show profile-id-qci-mapping table name table1
```

show ps-network

☞

Important   In Release 20 and later, HNBGW is not supported. This command must not be used for HNBGW in Release 20 and later. For more information, contact your Cisco account representative.

Displays statistics for the Packet Switched (PS)-network(s) instance configured on a chassis for HNB-GW service sessions.

Product   HNBGW

Privilege   Security Administrator, Administrator, Operator

Command Modes   Exec

The following prompt is displayed in the Exec mode:

`[local]host_name#`

Syntax Description   **show ps-network { all | name** *ps_name* **} [status] [| { grep** *grep_options* **| more }]**

all

Displays status counters for all PS (packet switched) networks configured for HNB-GW service sessions on a chassis.

name *ps_name*

Displays status counters for a PS network configured for HNB-GW service specified as an alphanumeric string of 1 through 127 characters that is case sensitive

| { grep *grep_options* | more }

Pipes (sends) the output of this command to the specified command. You must specify a command to which the output of this command will be sent.

Refer to *Regulating a Command's Output* section of the *Command Line Interface Overview* chapter for details on the usage of **grep** and **more**.

Usage Guidelines   Use this command to display the status of any or all PS-network(s) instance configured on a chassis for HNB-GW service sessions.

Example

The following command displays the output for PS network instance status named *ps_1_hnb*:

```
show ps-network name ps_1_hnb status
```

☞

Important   Output descriptions for commands are available in the *Statistics and Counters Reference*.

show ps-network counters

☞

Important   In Release 20 and later, HNBGW is not supported. This command must not be used for HNBGW in Release 20 and later. For more information, contact your Cisco account representative.

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Displays the session counter information for a PS Network associated with Home-NodeB Gateway (HNBGW) services configured and running on a system.

Product   HNBGW

Privilege   Inspector

Command Modes   Exec

The following prompt is displayed in the Exec mode:

[local]*host_name*#

Syntax Description
```
show ps-network counters [ name ps_svc_name [ sgsn sgsn_point_code ] ] [ | {
grep grep_options | more } ]
```

name *ps_svc_name*

Filters the counter display based on an existing HNB-PS Network service name associated with an HNB-GW service running on system. *ps_svc_name* is an alphanumeric string of 1 through 63 characters.

sgsn *sgsn_point_code*

Filters the counter display filtered on the basis of SGSN address provided in the SS7 point code that is connected to a particular HNB-PS Network service. *sgsn_point_code* must be the address of an SGSN in SS7 point code notation.

| { grep *grep_options* **| more }**

Pipes (sends) the output of this command to the specified command. You must specify a command to which the output of this command will be sent.

For details on the usage of the **grep** and **more** commands, refer to the *Regulating a Command's Output* section in *Command Line Interface Overview* chapter.

Usage Guidelines

Use this command to view the session counter information for HNB-PS Network services configured and SGSNs connected on a system.

Example

The following command displays the counters for the HNB-PS Network service named *hnb_ps_svc1*:

```
show ps-network counters name hnb_ps_svc1
```

☞

Important Output descriptions for commands are available in the *Statistics and Counters Reference*.

show ps-network statistics

☞

Important In Release 20 and later, HNBGW is not supported. This command must not be used for HNBGW in Release 20 and later. For more information, contact your Cisco account representative.

Displays the Packet Switched session statistics for Home-NodeB Gateway (HNB-GW) services configured and running on this system.

Product HNBGW

Privilege Inspector

Command Modes Exec

The following prompt is displayed in the Exec mode:

`[local]`*host_name*`#`

Syntax Description
```
show ps-network statistics [ name ps_svc_name [ sgsn sgsn_point_code]] [
gtpu-only | ranap-only | sccp-only ] [ | { grep grep_options | more } ]
```

name *ps_svc_name*

Filters the session statistics display based on an existing HNB-PS Network service name that is associated with an HNB-GW service running on this system. *ps_svc_name* is an alphanumeric string of 1 through 63 characters.

sgsn *sgsn_point_code*

Filters the counter display filtered on the basis of SGSN address provided in the SS7 point code that is connected to a particular HNB-PS Network service. *sgsn_point_code* must be the address of an SGSN in SS7 point code notation.

gtpu-only

Filters the session statistics to display only GTP-U traffic for the specified HNB-PS Network service which is configured and associated with an HNB-GW service running on this system.

ranap-only

Filters the session statistics to display only Radio Access Network Application Protocol (RANAP) traffic for an HNB-PS Network service which is configured and associated with an HNB-GW service running on this system.

sccp-only

Filters the session statistics to display only Signaling Connection Control Part (SCCP) traffic for the specified HNB-PS Network service which is configured and associated with an HNB-GW service running on this system.

| { grep *grep_options* | more }

Pipes (sends) the output of this command to the specified command. You must specify a command to which the output of this command will be sent.

For details on the usage of the **grep** and **more** commands, refer to the *Regulating a Command's Output* section in *Command Line Interface Overview* chapter of the *Command Line Interface Reference*.

Usage Guidelines   Use this command to view the session statistics for overall session or in selected part of user session for HNB-GW services configured and running on this system.

Example

The following command displays the session statistics for the HNB-PS Network service named *hnb_ps1*:

```
show ps-network statistics name hnbps1
```

👉

Important   Output descriptions for commands are available in the *Statistics and Counters Reference*.